

# American Artisan

and Hardware Record

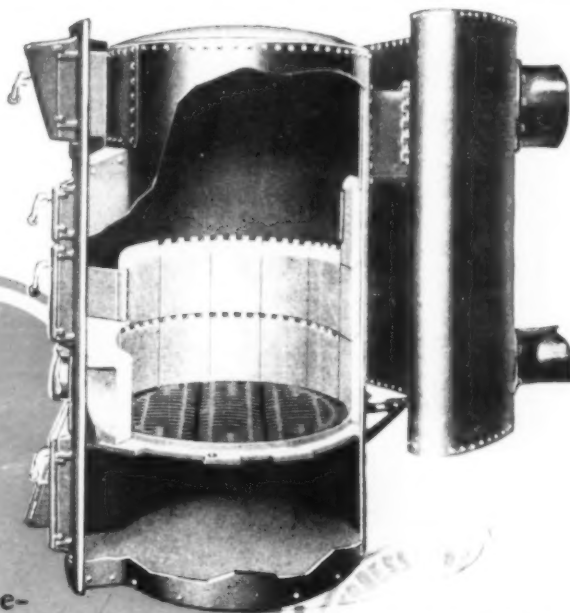
## Sheet Metal Work-Warm Air Heating

Vol. 94, No. 11

CHICAGO, SEPTEMBER 10, 1927

\$2.00 Per Year

### Success Heaters



Success Standard Service Heater

**YOU** will be more successful with the **SUCCESS** Line because it is the largest and most complete Quality line manufactured.

With the **SUCCESS** Line and our personal co-operation, you can land the heating of any style or type of building, because we make a heater for every purpose.

Large homes, churches, garages and public buildings can all be heated with **SUCCESS** Heaters, as well as moderate priced homes.

Write for more detailed information and study the **SUCCESS** Line.  
"IT WILL PAY."



Write for the Success Booklets and Catalogs today

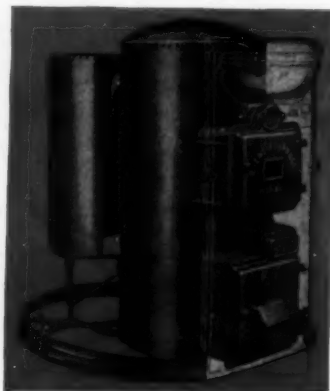
The Emblem

of Quality



Success Heater  
DES MOINES.

Mfg. Company  
IOWA



## To the Unsuccessful Dealer

PERHAPS not unsuccessful, but *unsatisfied*—the dealer who does a pretty fair volume of business, but finds upon going over his books at the end of the year that he has done a lot of hard work and worried a great deal for a very small profit.

To you men who experience this sort of trouble in spite of the fact that you do good work, *we know that we can be of valuable assistance.*

We've shown many a warm air furnace dealer how to sell his good work at a profit, even in cases where we couldn't assign the WEIR agency.

The heating industry needs the capable warm air heating man who conscientiously serves the public.

There is mighty good profit in so doing, and it's part of our business to show others how WEIR Dealers do it.

It costs you nothing and obligates you even less to become acquainted with us and to learn why WEIR dealers are successful.

A copy of the WEIR "Book of Facts" is ready for you and you will find it very interesting.

Just pin the request to your letterhead and we'll send it along.

I want a  
copy of your  
WEIR BOOK  
of FACTS

**The MEYER FURNACE Co.**  
Peoria, Illinois

# THIS is the SECOND FIRE

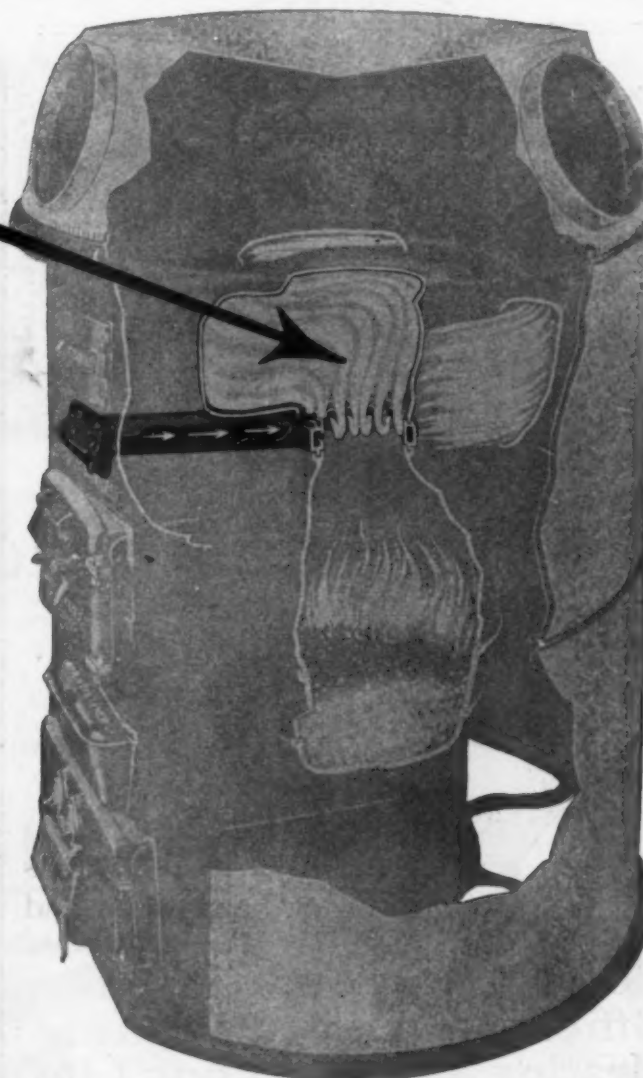
YOU can see the second fire created by the patented Carburetor in the Superior SUPER-SMOKELESS Furnace.

Your customers can see it, too, and that's one reason why it so often sells on sight.

- And because this secondary fire uses otherwise wasted smoke, soot and gases for its fuel, it keeps the radiator and flues free from soot. Result, a furnace that is efficient at all times.

These facts make fast friends of your customers and sell more and more SUPER-SMOKELESS Furnaces for you.

Because the ability of the SUPER-



SMOKELESS Furnace to burn smoke, carbon and gases is *actually visible*, it lends itself to a remarkable *Sales Development Plan* which will make money for you. Write us for interesting details of this sales-making money-making plan.

Utica Heater Co., Utica, N. Y.  
Makers of Superior Pipe and New Idea Pipeless Furnaces  
365 E. Illinois Street - - - Chicago, Ill.

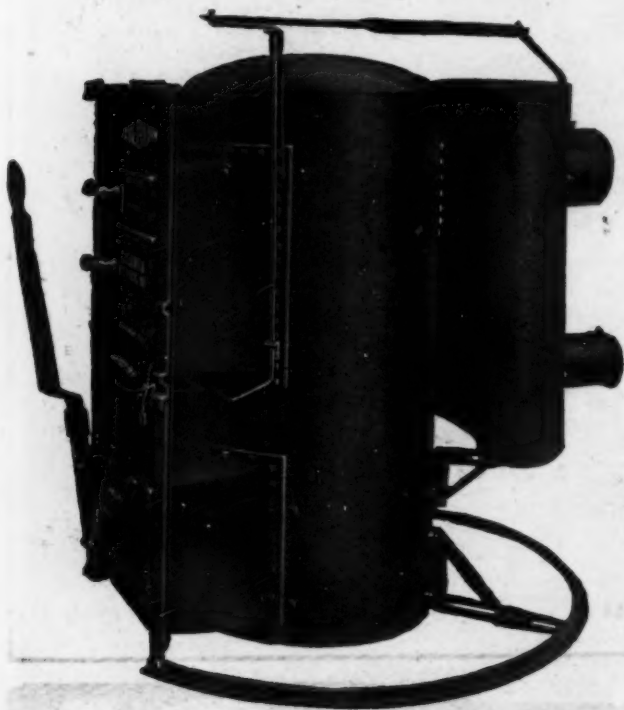
## SUPERIOR SUPER-SMOKELESS WARM AIR FURNACE

SUPERIOR DEALERS ARE EXCEPTIONALLY LOYAL—WHY?





## ~ the best balanced Steel Furnace



### Correctly Proportioned for Efficient, Large Volume Heating and Extra Long Life

**B**ECAUSE it is correctly designed it burns all the fuel and gets all the heat from the fuel.

The three-flue radiator in the Colburn is not too small or too large but the correct size in harmony with the size of the drum.

The drum is correctly proportioned in height to the size of the grate. This makes possible a steady, clean fire.

The Colburn is made of the finest 3/16 inch steel—arc welded, gas, soot and oil tight.

The specially designed grates clean the rim of the fire pot and have a center dump—operated by shaker handle. Efficient and simple air blast, automatic opening of direct damper (an exclusive Colburn feature) a ten year guarantee and other features make the Colburn an extraordinary fine furnace.

*The Colburn agency is a growing asset—our close sales co-operation will please you—write today for full details*

**COLBURN HEATER CO.**

1955-75 North Long Avenue  
CHICAGO, ILLINOIS



### FIRST ~

Make up your mind you want the best furnace business that your town can produce.

### SECOND ~

Make sure you can deliver the best class of warm air heating installations by knowing and using the Standard Code—your safeguard for correct installations and a strong selling argument—

### THIRD ~

Make sure of a proper heating unit and a good profit by lining up with the famous ATH-A-NOR High Quality Furnaces.

*Write today for interesting literature on  
ATH-A-NOR and SOLID COMFORT furnaces*



**The MAY-FIEBEGER  
FURNACE CO.**

Newark, Ohio

*Mention AMERICAN ARTISAN in your reply—Thank you!*





## Feed 'em and Weep!

You would hardly buy an elephant to do the work of a horse. The extra cost of feed would be all out of reason for the amount of work it would perform and you might go broke keeping him alive.

That's the chief complaint against most furnaces. They've got elephant appetites and keep their owners broke buying fuel. They have never made a friend for any dealer.

The "AFCO" Boiler Plate Furnaces, with their specially designed radiators and fire travel control, extract and capture the heat from all the fuel for heating the home.

Your expert installations will give more complete satisfaction when they are built around an "AFCO" Furnace, and your customers will be happy over their saving in the cost of fuel. That's good business both for you and for us.

Your request for complete "AFCO" dealer information will have prompt attention—without obligation. American Furnace Co. —St. Louis, Mo.



*The fuel saving "AFCO" Crescent*

**Other Furnaces Come and Go, but "AFCO" Stays and Grows**

# The Economical NIAGARA FURNACE



The NIAGARA is an engineering marvel of efficiency.

In design—in material—in workmanship—it is a finished product—the result of over thirty-five years of experience.

It embodies quality, ease of installation, attractive price and gives long service with freedom from repair.

*Ask us about the Niagara  
Dealer Franchise*

Also Manufacturers of  
**Monarch Furnaces**

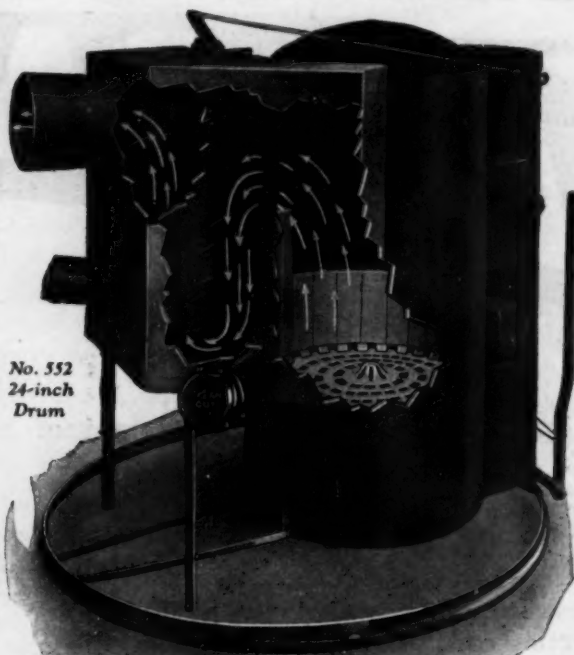
**THE FOREST CITY FOUNDRY & MFG. CO.**  
1220 Main Avenue  
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## Making a big hit because it has these features--

1. Made of Toncan Copper Mo-Lyb-Den-Um Iron
2. Designed in accordance with the new Rating Formula—Twenty-two and One-half inches of Radiating Surface to every square inch of Grate Area.
3. Unit Circular Grate—One Piece
4. Patent Dumping Device
5. Electric Welded Throughout
6. Radiator Supported Independently
7. Shipped with Front Assembled
8. Capacity of No. 544—24" Drum, 635 square inches of Pipe Area.

*THE Robinson Furnace is a new furnace—a heating plant that meets the demand for quality and service. Get acquainted with our dealer proposition NOW.*

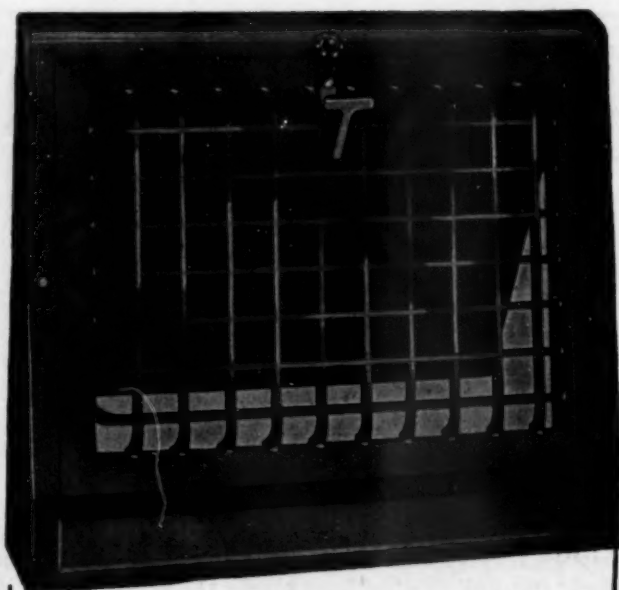
**The A. H. ROBINSON CO.**  
MASSILLON, OHIO



No. 552  
24-inch  
Drum

# ROBINSON

## Steel Furnace



## Have you seen it?

# WALWORTH

## New Standardized

STYLE B

## Baseboard Register

**N**OT only made throughout in accordance with the rules of the Standardization Committee but it is the *neatest* durable register ever made to sell at a popular price.

Simple, easy and accurate in operation, cast face made of the best iron, finished in all the popular finishes and made in the following sizes:

8x10	inch	2 1/4	base	extension
8x12	"	2 1/4	"	"
9x12	"	2 1/4	"	"
10x12	"	3 1/4	"	"

*Study the features of this new register.*

Write today for full particulars and prices on the Walworth New Standardized Style B Baseboard Register.

Order some for that next job—your customers will want them.

*Made by the makers of Walworth Double Gratings, Semi-Steel Registers, Side Wall and Floor Registers, Ventilators, Borders and Casings Rings.*

# THE WALWORTH RUN FOUNDRY COMPANY

West 27th Street and N. Y. C. & St. L. R. R., Cleveland, Ohio

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ROBINSON FURNACE CO., Chicago, Ill.  
HAET MFG. CO., Louisville, Ky.  
PHILLIPS & BUTTORFF MFG. CO., Nashville, Tenn.

*Eastern Representatives:*

PENN TINSMITH'S SUPPLY CO., Philadelphia, Pa.

# BOOMER

**T**HIS is our latest addition to the Boomer line. We heartily recommend it for your favorable consideration.

The severe tests we have given this furnace have proven its durability. The unsolicited reports we received from users last winter have been most flattering.

For durability, economy, easy to operate, easy to set up and the low price at which we offer this furnace, you will make no mistake in arranging for the agency.

**THE HESS-SNYDER CO.**  
MASSILLON, OHIO

Makers of BOOMER FURNACES for Forty-Three Years

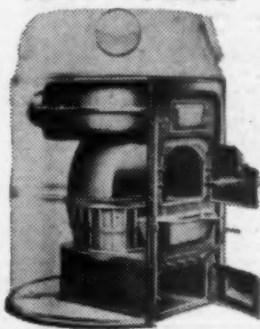


## Meeting the Needs of the Western Furnace Dealer

**Y**EAR after year "Standard Line" dealers multiply in number and increase their percentage of the available business. This is mostly due to the completeness of "Standard Service."

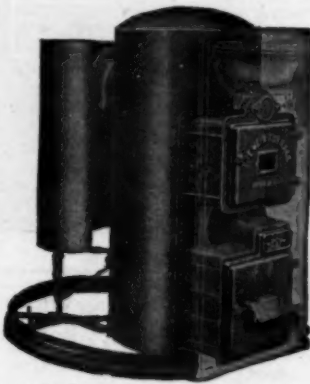
*For Instance:* From what other source can the Western Dealer obtain such complete selection of modern Warm Air Heaters as the Nesbit; Weir and Stanco Furnaces, 9 styles, and 47 sizes, in all.

*Nesbit* Moist Heat Furnace



Where else can you send an order for all of the following national brands and be assured of having your order filled complete?

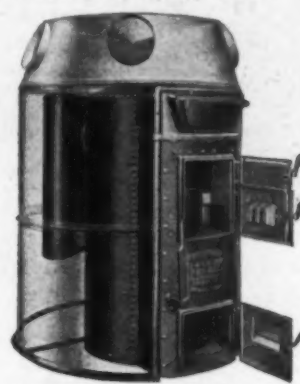
HANDY PIPE AND FITTINGS  
"NO STREAK" REGISTERS  
H & C—170-190 SERIES REGISTERS  
STANCO REGISTERS  
WISS SNIPS  
PEXTO TOOLS  
MAJESTIC CHUTES AND REGISTERS



WEIR STEEL FURNACE

Also the staple lines such as steel and semi steel Registers; Wood Grille; Whitney Tools; Asbestos Paper and Paste, etc., etc.

*In fact we have everything for the Furnace-man.*

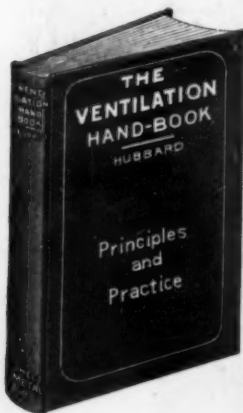


STANCO STEEL FURNACE

**STANDARD FURNACE & SUPPLY CO.**  
OMAHA, NEBR.

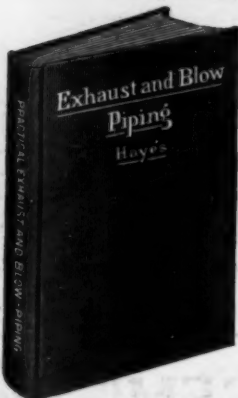


# THOUSANDS have perfected their training and increased their efficiency and earnings by reading these *easy-to-read* books on SHEET METAL WORK

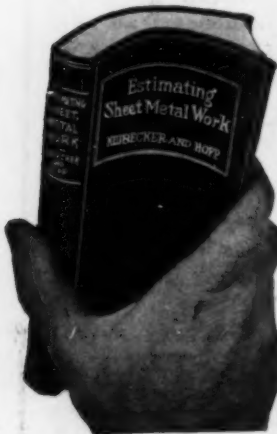


**THE VENTILATION HANDBOOK** A PRACTICAL book designed to cover the principles and practice of ventilation as applied to furnace heating; ducts, flues and dampers for gravity heating; fans and fan work for ventilation and hot blast heating by means of a comprehensive series of questions, answers and very plain descriptions easy to understand. By Charles L. Hubbard.  
Price.... **\$2.00**

## HAYES PRACTICAL EXHAUST AND BLOW PIPING

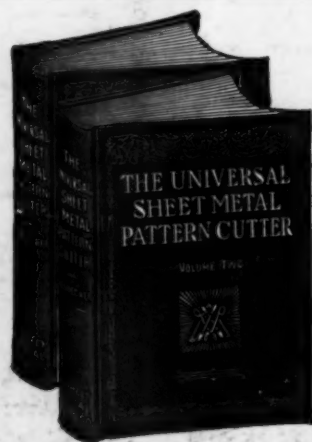


**EXHAUST and Blow Piping** has had an unusually big demand. A fresh supply is now off the press and is in our hands for immediate delivery. It has an invaluable treatise on the planning, cost, estimation and installation of fan piping in all its branches, giving all necessary guidance in fan work blower and separator construction. 159 pages, 5 x 8. 51 figures. By Hayes. Cloth ..... **\$2.00**



## ESTIMATING SHEET METAL WORK

ANOTHER good book by Wm. Neubecker and A. Hopp. This is a new edition. A manual of practical self-instruction in the art of pattern drafting and construction work in light and heavy gauge metal, including skylights and roofing, cornice work, etc. 417 pages; 4 1/4 x 7 in.; 215 figures. Cloth. Price ..... **\$3.00**



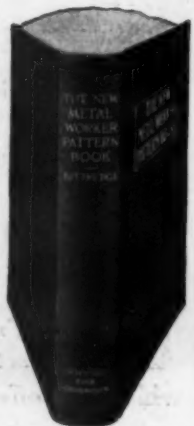
## Every Sheet Metal worker should own this 2 Volume Encyclopedia of Sheet Metal Working

THE most practical and useful treatises on the subject. Work of all the branches of the trade and the broadest scope of details are found—inside and outside work—small jobs and the most complicated are shown, explained and profusely illustrated. The first volume deals with all types and kinds of inside small and large sheet metal work. The second volume deals with the more advanced branches of sheet metal work, in fact is largely devoted to the architectural end of the business. It consists of 400 double column pages and is illustrated with 711 engravings showing all methods under treatment, as well as perspective views of the subjects of the patterns, and other demonstrations in their finished state. It includes drawing, full sized detailing and lettering, development and construction of all forms of sheet metal construction work. The volumes are bound in heavy cloth and each measures 9x12 in. Each contains over 380 pages and 680 original drawings. Price each..... **\$7.50**

**\$3.00**

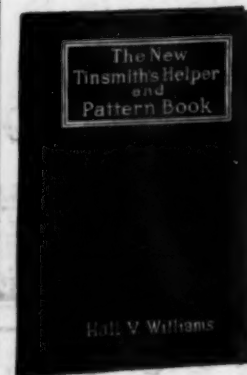
## THE NEW METAL WORKER PATTERN BOOK

IT contains solutions of individual pattern problems in every department of sheet metal work, giving the complete methods of laying out all forms of work. It covers every detail from the selection of tools, through Linear and Geometrical Drawing, to development of Difficult Problems by Triangulation. This revised edition contains a series of automobile patterns. These include laying out guards, fenders, cowls, skirts, hoods, etc. It has 514 pages, 895 illustrations and diagrams, measures 9x12 inches and is cloth bound. Price ..... **\$6.00**



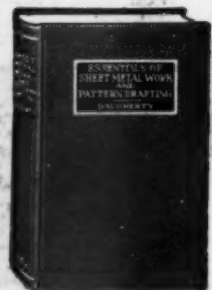
## THE NEW TINSMITH'S HELPER AND PATTERN BOOK

A NEW edition of one of the most popular books on tin-smithing and elementary sheet metal work. The contents of this new edition are new excepting the chapter on Mensuration, which has been re-arranged and amplified, and possibly some fifty pages of problems and tables which are classified to the phase of the work they cover. This book covers simple geometry and every phase of modern pattern cutting, from the making of every type of Seam, Lap and Joint, to Conical Problems and Tinware, Elbows; Piping, Ducts, Gutters, Leaders, Cornice and Skylight Work and Furnace Fittings, 352 pages, 247 figures and 165 tables, flexible leather bound and measures 4 1/2 x 6 inches. By Hall V. Williams. Price ..... **\$3.00**



## ESSENTIALS OF SHEET METAL WORK AND PATTERN DRAFTING

A BOOK produced by the combined efforts of L. Broemel and the late Professor J. S. Daugherty, instructor in Sheet Metal Work at the Carnegie Institute of Technology. Pattern drafting is its biggest feature; not only tells how to make the pattern, but how to develop it with modern machines and tools; gives valuable assistance on soldering, brazing, welding, crimping, beading, straight, circular and irregular cutting. Bound in leatherette; 500 pages; more than 400 pen drawings and illustrations. Price ..... **\$2.00**



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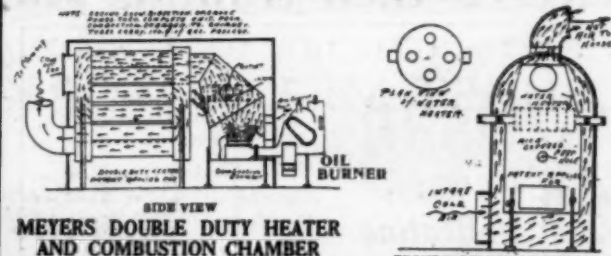
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Deduct 10% from TOTAL amount of order when subscription is included with order for books.

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**MEYERS DOUBLE DUTY HEATER AND COMBUSTION CHAMBER**

Fig. 1 shows combined fuel saving unit with burner in place. Arrows indicate volume of heated gases at top of fuel saver and small amount escaping into chimney.

**IF THEY DON'T BUY IT, THEY PAY FOR IT, ANYWAY!**  
We get every heat unit and put it to work . . . People can burn oil now cheaper than coal . . . We have a real money-maker for you, Mr. Dealer . . . Heat TWO apartments for the cost of ONE.

**MEYERS FUEL SAVER CO., Inc.** Janesville, Wis.

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for **STOVES-FURNACES-BOILERS**

Send for our illustrated Order Blanks

**NORTHWESTERN STOVE REPAIR CO. CHICAGO-ILLINOIS**

# BOLTS

WE MANUFACTURE A COMPLETE LINE OF BOLT PRODUCTS, INCLUDING STOVE BOLTS, CARRIAGE BOLTS, MACHINE BOLTS, LAG BOLTS, NUTS, COTTER PINS, ETC. ALSO STOVE RODS, SMALL RIVETS AND HINGE PINS. CATALOG ON REQUEST.

**THE LAMSON & SESSIONS CO.**  
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1971 W. 85th St. Cleveland, O.

## PATTERNS FOR STOVES AND HEATERS

**THE CLEVELAND CASTINGS PATTERN COMPANY**  
CLEVELAND, OHIO


## PATTERNS

FOR STOVES AND HEATERS FIRST-CLASS IN WOOD AND IRON

**VEDDER PATTERN WORKS** ESTABLISHED 1835 **TROY, N. Y.**

## IRON AND WOOD STOVE PATTERNS

**QUINCY PATTERN COMPANY**  
QUINCY, ILLINOIS



### Traveling East or West

A restful night on beautiful Lake Erie—to or from Niagara Falls, will add enjoyment to your trip.

Palatial steamers—Unlimited facilities, including large airy state-rooms, excellent dining room service.

**Daily May 1st to November 14th—Each Way Every Night between Cleveland and Buffalo**

Leaving 9:00 p. m., arriving 7:30 a. m. (Eastern Standard Time)  
Write for new Steamer Schedule between Cleveland and Buffalo via ERIE during July and August

Connections at Buffalo for Niagara Falls, Eastern and Canadian points. Connections at Cleveland for Cedar Point, Put-in-Bay, Toledo, Detroit and points West.

Our new 32-page Tourist Guide with complete information and maps will be mailed free—on request.

Ask your ticket agent or tourist agency for tickets via C & B Line. Your rail ticket is good on our steamers.

**The Cleveland and Buffalo Transit Co.**  
Cleveland, Ohio

**FARE \$5.50**

New Auto Rate \$5.00 and up



### "GEM"

Adjustable  
**RADIATOR SHIELDS**

Every steam or hot water radiator is a live market for a "GEM." Protects and saves fuel.

8 popular sizes, gold-bronze or aluminum finish. Adjustable to radiator top widths, 6" to 13"; lengths, 11" to 65". Retail at \$4 to \$7. Beh & Co., Inc., 1140 Broadway, New York, N. Y.

**BEH & CO.**  
Buy from Your Jobber



### "American Seal"

**FURNACE CEMENT**  
**Roof Cement — Stove Putty**  
**Plumbers Putty**

**PAINTS and SPECIALTIES**

**WILLIAM CONNORS PAINT MFG. CO.**  
TROY Established 1852 NEW YORK

**JAMES L. PERKINS**  
Western Distributor  
140 S. Dearborn St., Chicago, Ill.



Published to Promote  
Better  
Warm Air Heating  
and  
Sheet Metal Work

Founded 1880

# American Artisan

and Hardware Record

## Sheet Metal Work-Warm Air Heating

Yearly Subscription  
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United States.....\$2.00  
Canada .....\$3.00  
Foreign .....\$4.00

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### ADVERTISING AND EDITORIAL STAFF

Etta Cohn  
J. F. Johnson

Franklin Butler  
Chas. E. Kennedy

G. J. Duerr  
Frank McElwain

Eastern Representatives: M. M. Dwinell, J. S. Lovingham, 156 Fifth Avenue, New York City

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CHICAGO, SEPTEMBER 10, 1927

\$2.00 Per Year

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### A Message to the Younger Sheet Metal Men

Every school boy has heard of the story of Hans of Holland, the little boy who stuck his finger into the leak in the dyke and thus prevented the water from wearing a larger hole and flooding his country. This small timely service by a small boy saved his country and its people.

The young men or apprentices in the sheet metal industry are to be given a chance to render a service to their industry and to their country equal to that of Hans of Holland.

In the issue of October 1st there will be published the particulars about an offer to be made by the Sheet Steel Trade Extension Committee for the first fifty specimen sheets having on their surfaces at least one unbroken paint blister. The object of the Sheet Steel Trade Extension Committee is to get a group of specimen sheets having paint blisters on them which their chemists can analyze with the view to determining why these blisters occur. The message will be directed to the younger men of the industry and it is hoped that they will take the matter seriously.





## A proving ground for welding

**G**ENERAL MOTORS has built a testing ground for automobiles. Hundreds of miles of roads of all kinds are available and cars are operated until they fall to pieces.

A similar proving ground for oxy-acetylene welding and cutting is operated by Linde in Long Island City, in Buffalo and in ninety-seven other cities throughout the country where plants of the Union Carbide and Carbon Corporation are located.

Exhaustive tests are made on every kind of welding or cutting process, to establish the most economical methods. These methods are then

described in detail and published as a "procedure control" or a "welding method."

Such proving grounds give to Linde customers the assurance that they will be kept up-to-date and even ahead-of-date on welding methods. It is a guarantee of good faith that the company is working to develop economy and efficiency in oxy-acetylene applications.

THE LINDE AIR PRODUCTS COMPANY  
Unit of Union Carbide and Carbon Corporation



General Offices: Carbide and Carbon Building  
30 East 42d Street, New York

37 PLANTS . . . . . 107 WAREHOUSES

# LINDE OXYGEN

# B U S I N E S S

**T**HE first definition of the word "business" in the dictionary is this—the "**quality or state of being busy.**"

That surely means that first, we must be **busy minded**, and second, **physically busy at all times**—if we wish to keep business and make our business grow.

To state that business is "off" is to imply that our busy mindedness and state of being busy are slacking also.

To state that people are not buying may at times be correct, but is it not true that at such times we should increase our activity toward making business improve—by displaying more of **the quality and state of being busy.**

When folks don't buy at a time when money is plentiful, **as it is now**, the answer lies with us who have something to sell.

It means that the public has more than caught up with us—they are buying from those who are busy enough to **sell.**

If you are a retailer you have but to look about you to see that

some merchants are very busy—that the public has money but that they are buying from those who are **intensively selling.**

If you are a manufacturer, you know that some industries are busier than ever before—and what industries are they?

We are in a staple industry—an industry that supplies **life's necessities** and if the public has money our industry should be all that **we can make it.**

Are we **selling** enough?

Have we been too used to seeing business **fall** our way?

The dealer is the manufacturer's outlet—he must be **sold** and he must be **sold on selling.**

He must be **kept** sold on the business he is in and the products he sells.

The **selling** dealer is the man who **reads business papers**—he is the type of man who possesses **the quality and state of being busy.**

He is the type of man who **sells** and can be **sold at all times.**

## AMERICAN ARTISAN



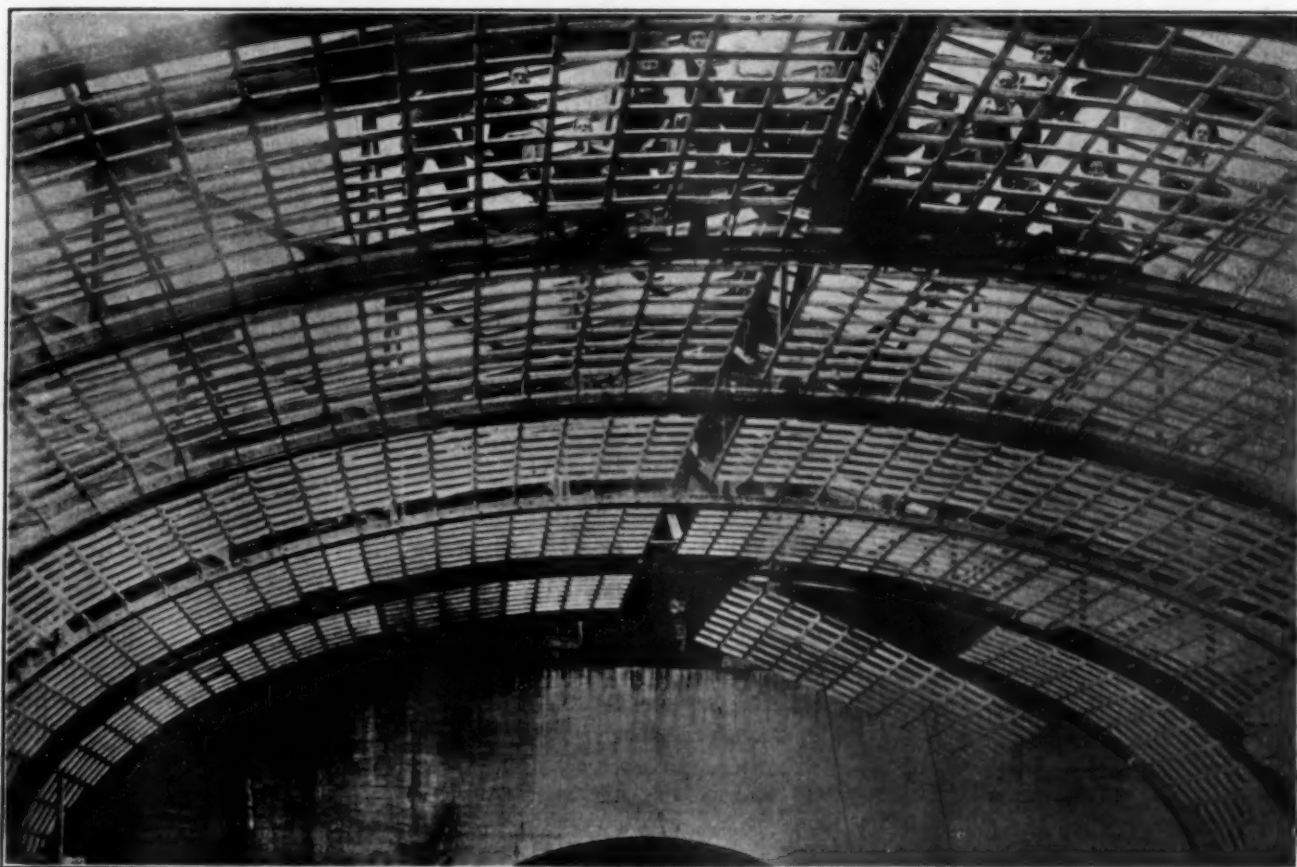
# American Artisan and Hardware Record



Vol 94

CHICAGO, SEPTEMBER 10, 1927

No. 11



Underside of Section of Framework for Ornamental Skylights in Utah Capitol. Altogether There Is About 28,000 Square Feet of Skylight, the Framework of Which Is Made of 26-Gauge Armco Ingot Iron

## Sheet Metal Giving Good Service on Utah State Capitol

*Structure Has in Neighborhood of 28,000 Square Feet of Skylight*

**"S**TATE Capitol Specialist" might well be the title applied to S. A. Spencer, sheet metal contractor of Denver, Colorado. Mr. Spencer has now completed the sheet metal work on three state capitols, and his work in each case is giving very satisfactory service. These are the state houses of Utah, Idaho and Oklahoma.

The Utah state house at Salt Lake

City was one of the most interesting jobs because of the large amount of metal required. A veritable maze of metal framework was built into the top of the building to serve as ornamental skylights. Altogether there are about 28,000 square feet of skylight built of 26-gauge Armco Iron.

This building was completed in 1916. But the eleven years of serv-

ice have treated it kindly. The skylights are still in very good condition and giving satisfactory service.

Mr. Spencer was also responsible for the dome, which was quite an undertaking itself. The main part of the dome is covered with 16-ounce ornamental copper, with double seam construction. No solder whatever was used.

On top of the principal dome is a





View of Utah State Capitol at Salt Lake City, Showing How the Ornamental Dome of Copper and Iron Appeared in 1916 at Time of Installation

smaller elliptical-shaped lantern dome, which is of particular interest because of the fact that the side posts are filled with reinforced concrete, thus making it of very substantial construction.

"What a beautiful capitol!" is the usual comment when visitors first see this building. It is noted throughout the West as being a magnificent piece of architectural creative work. Credit for its design goes to Architect Richard R. Kletting.

For more than twenty years Mr. Spencer has been engaged in sheet metal work. He is now the proprietor of Spencer Sheet Metal Works, 907 Fourteenth Street, Denver. Besides this work, he has completed many other important jobs.

#### **Huge Convention Hall Is Built to Withstand Salt Air at Atlantic City**

With a seating capacity of 41,000, the Convention Hall now under construction at Atlantic City, New Jersey, will be one of the largest

auditoriums in the world. The ball room alone will hold 5,000 people and there will be 375,000 square feet of exhibition space. The hall will front directly on the boardwalk and be just a few yards from the ocean. Copper, brass and bronze have been installed.

More than 60,000 pounds of brass pipe have been used for hot and cold water lines. Ornamental bronze decorates the store fronts and main entrances, while grilles, thresholds, directory boards, radiator enclosures for monumental rooms and the collapsible gates at the boardwalk entrance are made of the same metal.

All exterior windows are bronze covered. A large amount of lead-coated copper has been used for door and marquee coverings and for roofing. Fresh air inlets are covered with copper bar grilles.

Lockwood, Greene & Co., Inc., of Boston, are the architects. The general contractor is the M. B. Markland Co. of Atlantic City. Brass pipe is being installed by J. H. Jolley & Co. of Philadelphia. The John

Polachek Bronze and Iron Co. of Long Island City is handling the ornamental bronze work.

The hall is an outstanding example of a permanent, and therefore economical, type of construction that is used with increasing frequency. All structures are subject to the attacks of the elements, more or less, but along the sea coasts of the country, where rain and wind beat with their fullest force and where salt air is engaged in a never-ending war on anything that corrodes, rust-proof copper, brass and bronze are indispensable for roofing, plumbing and ornamental metal work.

#### **Who Gets the Benefit of Price Cutting?**

"The price cutter is worse than a criminal," states an article in the *Standard Oil Company Magazine*. "He is a fool. He not only pulls down the standard of his goods; he not only pulls down his competitors; he pulls down himself and his whole trade. He scuttles the ship in which he himself is afloat.

"Nothing is so easy as to cut prices, and nothing is so hard as to get them back when once they have been pulled down.

"Any child can throw a glass of water on the floor, but all the wisest scientists in the world can't pick that water up.

"Who gets the benefit of price cutting?

"Nobody.

"The man who sells makes no profit, and the man who buys soon finds himself getting an inferior article.

"The man who cuts prices puts up the sign: 'This way to the junk pile.'

"He admits he cannot win by fighting fair.

"He brands himself as a hitter below the belt.

"If the business world were dominated by price cutters, there would be no business at all."

# Helping to Popularize Zinc and Zinc Products

## To Undertake Greater Advertising Campaigns for Educational Purposes\*

PREVIOUS publicity committees have felt, and your present publicity committee feels, that the American Zinc Institute is the only association that represents the whole industry, and it is upon the Institute shoulders that the laurel of success or the burden of failure will rest. Assuming that this is a fact, a galvanizing committee composed of important members of the Institute was appointed to work out proper standards for zinc-coating with the idea that once these were arrived at and established through publicity and advertising, the Institute would then be in the position to protect its own product in the eyes of the buying public and not allow the responsibilities to rest with any other organization. With the coöperation of many members of the Institute, a tentative zinc-coating standard was arrived at, and it was the purpose of the Institute to reclaim the confidence of the buying public in zinc-coated metals upon the basis of this new standardization.

The Publicity and Advertising Committee, however, without the expenditure of additional money, had planned also to promote an educational campaign on the wider uses of zinc and to take into consideration not only galvanized material, but zinc roofing and siding, as well as all uses to which zinc may be applied. It was felt by Mr. Peters' committee, as it is the opinion of your present committee, that the importance of presenting the entire story of zinc, its advantages and effectiveness, should be told primarily by the American Zinc Institute and that any particular uses to which zinc might be put by other

industrial enterprises or associations could logically and justifiably be made independently by these other interests.

Your committee feels that only the American Zinc Institute can tell the story of zinc and its merits as it should be told. Your committee is confident that the general buying public would give more credence to the advantages of zinc when it is told over the signature of the association which stands for, and is, zinc in America.

Your committee, however, favors the very closest coöperation and deference to other associations or enterprises that are interested in the promotion of products in which zinc is used and should, of course, place themselves at the disposal of such interests to supply facts and information upon which either promotional campaigns might be based or sales campaigns inaugurated, but your committee cannot bring itself to feel that the American Zinc Institute should be secondary when the subject of zinc and its many uses are considered.

### Report and Recommendations

Your chairman does not feel that this is the time or place for a lengthy, detailed report of findings and recommendations. Briefly, they constitute the following activities for the first year:

(1) A regular and persistent publicity campaign to be carried on, which would consist of editorial matter prepared and sent in complete plate form to a large number of daily and weekly newspapers throughout the United States.

(2) The use of metal, building and architectural trade publications in the form of paid page advertisements once a month for the period of one year for an educational and institutional advertising campaign.

Because of the lack of funds

available for publicity work, your committee has been able to accomplish very little during the past year. It has striven, however, to maintain the technical excellence of the Institute's bulletin and keep members and friends and other interested organizations alive to the importance of zinc and activities concerning the metal in all parts of the world. It has been possible also by the expenditure of a very modest amount of money and send out and secure publication gratuitously of two feature articles in connection with zinc and some of the personalities within the industry which has definitely helped to establish the solidity of the product and the industry. To date thirty odd insertions of these publicity articles have been secured in a wide range of newspapers throughout the United States totaling a circulation of nearly 3,000,000, as attested by the clippings on file in the scrap book here.

With favorable comments upon this extremely modest undertaking, your committee is confident that the time is now ripe to extend its activities more widely and as a preliminary to a national publicity and advertising campaign suggests that for the balance of 1927 and until the annual meeting of 1928 a trade and class publication campaign be authorized that will be the foundational structure upon which the future national campaign may rest. It is your committee's recommendation that a list of building and architecture publications carry a full page advertisement of the Institute once a month for twelve months at a cost of approximately \$25,000 and that in addition to this, \$4,500 be appropriated for the continuance of the free publicity campaign that has already been inaugurated.

\*Excerpts of an address delivered before the recent convention of the American Zinc Institute by C. F. Beatty.



In connection with the trade and class press above referred to in the building, architectural and metal fields, it is, of course, obvious that their use would be necessary for the dissemination of facts which properly represent zinc to the trade, that they may, in turn, convince the final purchaser of the merits to be found in our metal. This is especially true in the architectural and building fields and should it be the sense of this meeting that sufficient funds were available, your committee would supplement this trade paper and class paper advertising with certain literature of an interesting type that could be retained upon file in architects', metal workers' and builders' offices for such additional and detailed information as to make these several industries familiar with zinc's uses.

#### **Tell Both Limitations and Advantages**

Perhaps one of the most important pieces of literature that your committee could sponsor and secure as wide a distribution of as possible would be to make plain certain limiting qualities that are possessed by zinc so as to protect its general value and not commit it to uses beyond its possibilities. To view the situation broadly your committee would be careful to promote the use and sale of zinc for only such known uses as would rebound to the credit of zinc and the industry in general. Impending building construction throughout the United States, I am told, shows a grand total of approximately six billion dollars, and with the possibility of a greatly increased amount of zinc being used if the architectural and building industries were more familiar with our product, the potentialities of sales increase are obvious. If the industry is to grow in a well balanced manner it seems plain to your committee that serious consideration be given and favorable action be taken on this relatively small preliminary campaign.

Mr. President, I would like to read an extract from an editorial which appeared in last night's *Post Dispatch*, which has a slight bearing on this situation.

"Since the formation of the American Zinc Institute nine years ago, a campaign has been waged to promote the uses of zinc. It has produced results, but not sufficient to absorb the immense production which the war stimulated and which still continues to embarrass the industry.

"The campaign of exploitation by advertising the possibilities and undoubted economies of zinc, which has yielded returns, might be made more fruitful, we believe, if prosecuted with greater vigor, more aggressive confidence and a bigger war chest."

#### **How Profits Are Being Made in Side Lines**

Is there any reason why the sheet metal or furnace shop should not pick up some extra profits by handling specialties, as well as the drug store? It is a fact that drug stores have built up quite a business



**The "Yard-Boy"**

in cameras, toys, novelties, etc., although their principal line is drugs. These other lines have added considerably to their income.

The sheet metal or furnace shop, by merely carrying a sample on the floor, ought to be able to create interest on the part of those who enter the shop. It is noted that some of these shops do carry the new type of parlor furnace, register shields, etc., and it is certainly true that the sheet metal contractor, because of his everyday, personal contact with home owners, exerts a

certain influence which ought to rebound to his own benefit.

The Yard-Boy Incinerator Co., Inc., 10 East Huron Street, Chicago, recently placed on the market a new sheet metal rubbish burner and garbage incinerator that is of special interest to home owners in small towns, suburban communities, summer resorts, etc., where garbage disposal is a constant problem, as well as to city residents who desire a safe, convenient rubbish burner. This company believes that the sheet metal man is in a position to add from \$6.00 to \$12.00 per day to his income by merely suggesting the article to a home owner for whom he is doing sheet metal work.

The power of suggestion is potent, and as the average sheet metal man holds his customers and does more or less work for them from year to year, he is regarded as an authority; consequently, his recommendations or suggestions count for much.

The "Yard-Boy" Incinerator burns both wet and dry garbage, as well as rubbish, and as it is made of heavy sheet metal, it may be regarded as a proper item for display in the shop.

#### **How Highly Do You Value Your Display Windows?**

"To give you an idea how we value our windows," says David Mayer, superintendent of windows for the United Cigar Stores Company, "only recently an official of our company said that in his opinion the store rented by us for \$10,000 a year meant that we were paying \$7,000 a year rent for the windows and \$3,000 a year for the balance of the store."

Who said there was any question as to the most valuable part of a store?

You are selling necessities, comforts and happiness as well. Why shouldn't your windows work for you if they work for other merchants? A dirty, unattractive window not only keeps business from coming your way, it actually drives it away.



# Sheet Metal Solves Dust Disposal Problem of Milwaukee Millworking Shop

*System Has Received the Endorsement of the Milwaukee Fire Department*

**A** YEAR ago the Milwaukee Sash and Door Company of Milwaukee, Wisconsin, millworkers, had considerable trouble with their

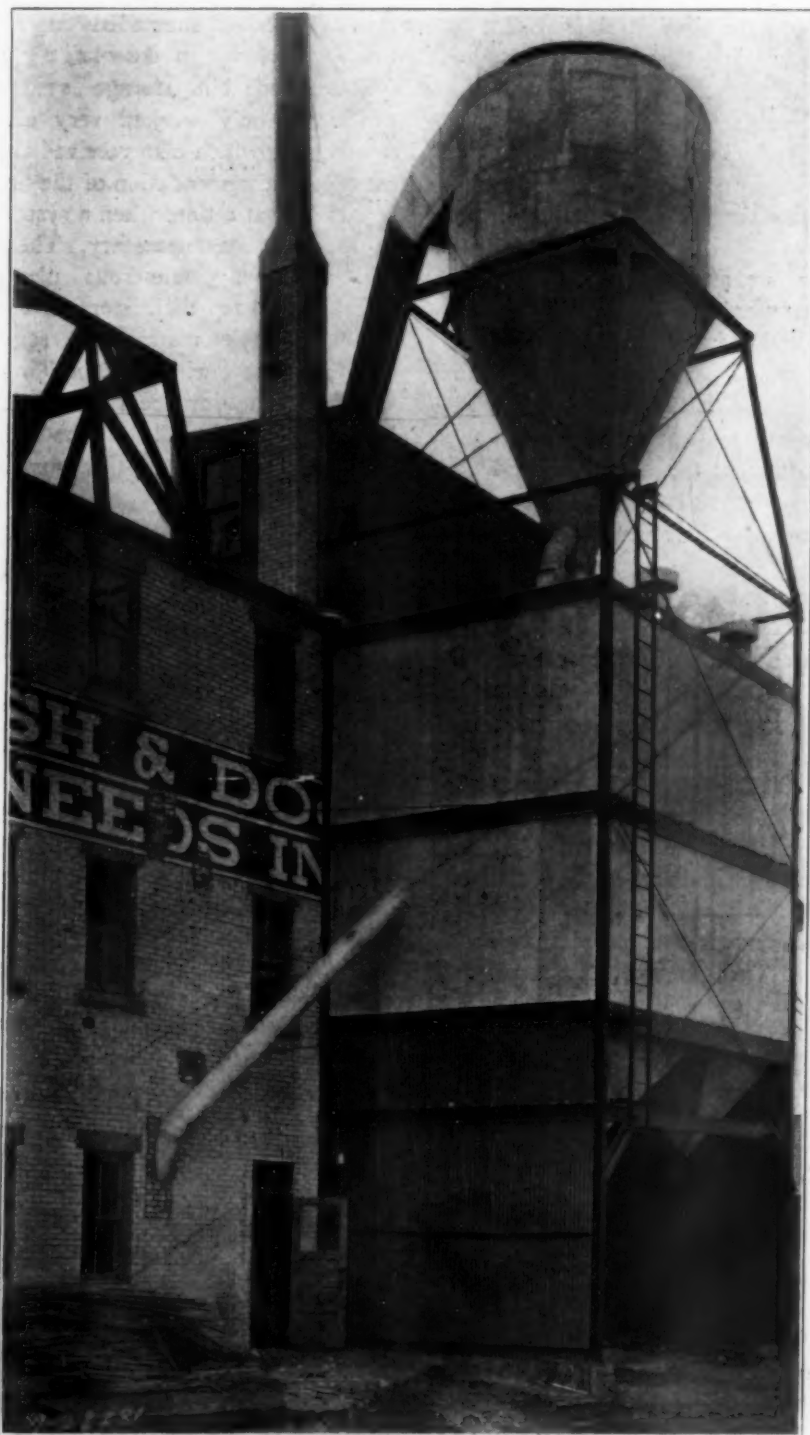
blower system and bins for storing their sawdust and shavings. The system which they had in operation did not work right for some reason or other and the dust from the millwork plant was flying all over the neighborhood. Something had to be done to correct this situation and Alex Goethel, of the Alex Goethel Sheet Metal Works, was called in to suggest some sort of cyclone and blower which would keep the sawdust from flying about the neighborhood.

However, before the job really got under way, the Marsh Wood Products Company had a severe fire in their storage bins, followed by an explosion which killed several firemen. Despite the fact that the Marsh company's bins were concrete bins and Mr. Goethel had contemplated a galvanized steel bin, a number of people were skeptical about the thing and felt that it might be dangerous. Then Mr. Goethel outlined the plans for his cyclone and storage bins to the fire department and received their endorsement on them.

He then proceeded to erect a cyclone of 16-gauge galvanized steel as a separate unit not connected with the building. This cyclone was 149 inches in diameter and 237 inches high, while the entire height of the cyclone and bins was 50 feet.

Inside the cyclone was a separator which separated the shavings from the sawdust. This separator was in the form of the outside cyclone, only that it is smaller and is also of 16-gauge galvanized steel. This inner cyclone is perforated and as the shavings are brought into the cyclone, the sawdust falls through below and the shavings stay on top.

Below the cyclone are the two bins, one for sawdust and the other for shavings. The shavings bin



Dust Collecting System Installed in the Factory of the Milwaukee Sash & Door Company. The System Was Especially Designed and Met All Requirements of the Board of Fire Underwriters.

measures 8x18x19 feet and the sawdust bin measures 6x18x19 feet. Two 12-inch galvanized pipes lead into the bins, and in the case of the shavings they can be passed into the bin, or through a valve which can be closed, allowing them to pass through the bin into the furnace room in the plant. The pipe leading into the cyclone at the top from the building is 28 inches in diameter.

Inside of both bins there are automatic sprinkler heads with ventilators on the top of the bins. Besides this, there is a manhole on top of the bin, through which in case of fire the firemen can place their hose. There is also a ladder leading to the top of the bins. In the pipes leading to the bins are automatic fire dampers which close as soon as the motor in the plant stops operating. The fact that the sheet metal is smooth and does not allow any particles of dust to congregate on the sides was another big asset in its favor when the fire department endorsed the system.

The blower has been in operation for a considerable length of time and has proved highly satisfactory. Below each bin are gate hoppers where the company can bag its shavings and sawdust, and according to reports, the system is paying for itself just by the amount of sawdust which the company is able to sell. Before the installation of the system, the sawdust and shavings were always mixed and they could not sell them, but since the separator has been in operation the company has had no difficulty whatever in disposing of the by-products.

Before the cyclone was working perfectly, however, Mr. Goethel experienced some difficulty. "The system worked fine," Mr. Goethel said, "but it made considerable noise. It seemed that when the air was forced into the cyclone by the motor it made a queer whistling sound as it passed through the perforated cyclone. For awhile we were stumped, and the people in the neighborhood began to complain of the noise the blower made. After

studying the situation pretty thoroughly, we decided to put baffle plates inside the upper cyclone so that the air, instead of going through the holes at an angle and causing the noise, would be deflected and pass through the perforations straight down.

"These baffles did the trick and the only objection to the system was overcome. The baffles are of 14-gauge galvanized steel from 2½ to 3 inches in length. The air coming into the cyclone and striking the perforations at an angle was responsible for the whistling noise, and as soon as the air was deflected by the baffles so that it passed through the holes vertically instead of at an angle, the difficulty was overcome.

The big factor in favor of the job is that it is fireproof, and the main reason for that is that it is separate from the millwork plant, and should fire start in the bins or cyclone, it would not endanger the lives of the

men working in the factory. Not only that, but the smooth sides of the steel will not allow particles of dust to accumulate, and thus all danger of an explosion is obviated. The automatic sprinklers and automatic fire dampers within the bins and connecting pipes are further precautions against any conflagration within the bins gaining much headway.

Mr. Goethel succeeded in his usual good way in devising a cyclone and bin storage system which not only worked very efficiently, but which also received the complete recommendation of the fire department at a time when a system of that sort was necessary. There still are today numerous plants where they keep their storage bins of inflammable material in some dangerous place within the building, even near the furnace room itself, but the system installed at the Milwaukee Sash and Door Company is absolutely fireproof.

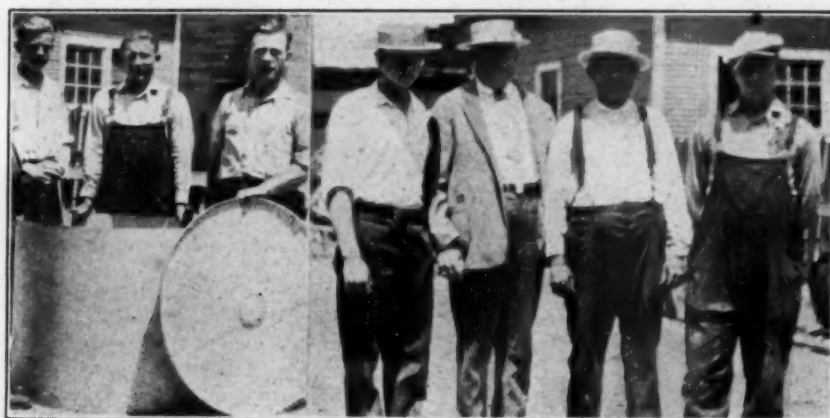
## Sheet Metal Specialty Manufacture Earns Good Profit in Chicago

*Conduct of Such Business Requires Versatile  
Mind and Thorough Knowledge of Sheet Metal*

**I**N THE City of Chicago and in all other large cities we find the sheet metal contractor who devotes his entire time and effort to specialty jobbing.

Chicago is a manufacturing center, a hotel center and a railroad

center. Each one of these activities call for a large amount of sheet metal work. New manufacturing processes require special equipment and the desire to render as much as possible of this equipment fireproof as well as rustproof causes a de-



The Novaks in the Sheet Metal Specialty Business. Reading from Left to Right —Tom and Ignatius Novak and John Lutze. Then Ignatius Novak, His Father, Frank Novak, John Novak and His Son, Tom Novak

mand for sheet metal specialties.

To make a success of the sheet metal specialty business, however, it is absolutely essential that the contractor know manufacturing costs and have a fertile imagination. He must be able to analyze the processes of manufacture and construct the article which will best do that thing which is necessary in those processes of manufacture—be it removing dust, gas fumes, liquids or what not.

One sheet metal shop in Chicago which has been successful in meeting the demand for sheet metal specialties from the manufacturing and hotel districts for the past twenty years is Novak & Company, 1928 Fullerton Avenue. Novak & Company's plant is located on the outskirts of Chicago's gigantic manufacturing district and the type of

## What Is Best for Consumer Will Be Developed

### Consumers' Needs Good Criterion to Judge of How to Succeed in Business

**I**F THERE is to be continued success in any business there must be at least a degree of idealism. In the long run, it pays to be honest if only from a selfish standpoint. All of which applied to the retail business means that it is good business to be square with your customers. The interest of your clients must be taken to heart. What is good for them is invariably good for the business.

In the natural evolution of economic development, what is best for the consumer will be developed. In the meantime, various factors are

quently everybody concerned, from the textile men to the clothiers, are convinced of the advisability of marking merchandise in no uncertain terms so that the consumer will know, that "it will clean," or "it will not clean," and consequently will have no cause for dissatisfaction.

Again, we see that manufacturers of hosiery are at work to bring into line those companies that have not marked defective merchandise, so that the customer may know that the goods are substandard. The results of sales of defective hosiery reacted seriously to the detriment of those hosiery concerns selling standard values. The whole trade field felt the results of the lack of fairness and for the benefit of the consumer and the welfare of those connected with the trade such hosiery is to be plainly marked.

#### Must Give Value Received

There are still other factors at work for the benefit of the consumer. Competition has compelled us to give the consumer a fair price. We are quoting him merchandise at the lowest possible price at which the goods could be produced and sold at retail. It is no longer a question of just how much we can get, but how low we can sell the article and make a legitimate profit.

We are with the pressure of competitive agencies gradually raising our ethics of sales, and learning with more or less thoroughness that although legitimate profits are an honorable business goal, we must necessarily give the customer value received for his money. If we offer him good merchandise at a fair price if we give him a square deal, we are assured that it is good business for us. A simple rule, but one which can be depended upon as a good basic policy.

When did you check your mailing list last? When did you circularize it last?



The Establishment of Novak & Company Located in the Midst of the Manufacturing District of Chicago.

work that comes into it is extremely varied. They are called upon to make tanks of all sizes and shapes, to be used for many different purposes. The manufacture of ice making devices is another prolific source of profit to this firm. A great deal of business is also brought to the firm by tanneries, soft drink manufacturing plants, and the like. There is a great deal of this type of work to be had in almost any city regardless of its size if the sheet metal contractor will equip himself to do it and then go after the work.

Novak & Company is a family affair. It is run by Frank and John Novak. Ignatius and Tom Novak are the sons of Frank and John Novak, respectively, and these two boys are taking an active interest in learning the business of their fathers.

at work to insure a square deal for the customer. Competition, and increasingly keen competition, will take care of that.

We are even, it appears, going out of our way to be of service. For instance, business is facing such problems as arise through the fact that certain garments cannot be cleaned. If we had not assured the customer that the merchandise would stand up under the cleaning process, we used to think we were observing the ethics of salesmanship. But the customer probably had the idea it would clean, was incensed because it would not, and came back at us with a vengeance. The cleaner passed the buck to the clothier, the clothier to the dyer, the dyer to the manufacturer, and the latter to the textile men. Everybody came in for a share of the blame. Something had to be done about it and conse-



# Developing Pattern for Inside and Outside Moulding Gutter

*Pattern Drawn Up in Reply  
to Request of Carl P. Lauth*

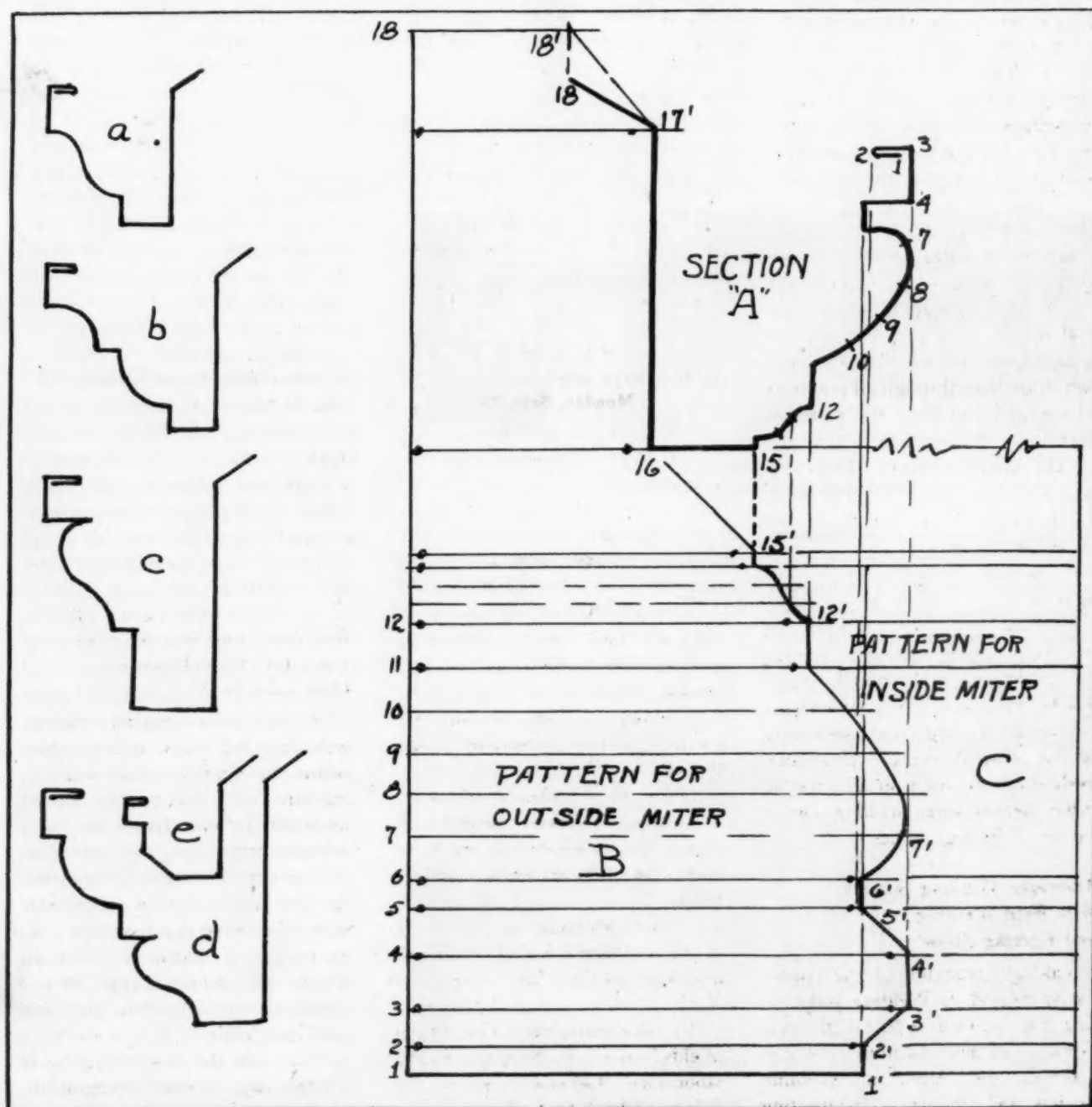
By O. W. KOTHE, Principal St. Louis Technical Institute

**R**ESPONDING to the inquiry of Lauth Brothers, of 1234 North Hamlin Avenue, Chicago, for an inside and outside gutter miter development. The accompanying drawing will illustrate this.

You can make the design of gutter anything you wish, as shown by the variety of details, as a-b-c-d-e and "A," and if a person has a mind, he can find a score or more of designs. It is not the design that

we are after so much as the method of arriving at the pattern.

You can use any design you choose. In this case we use the shape "A," which can be detailed to suit a certain girth—such as a 13"



Patterns for Moulded Gutters

or a 14" or a 15", or anything else desired. When the design is selected than put it down, and divide all curved lines in equal spaces. This is to establish working points on curved surfaces, and make it convenient for picking off the girth.

Next number all points and bends as shown, in order to have definite numbers for your points and lines to correspond. After this draw any line, as 1-18, and on it step off the girth spaces from the detail "A," using the dividers and picking each space separately, as 1-2; 2-3; 3-4; 4-5, etc., and set it on the line 1-18 in numerical order.

Now draw horizontal stretchout lines from each of these points to extend past the vertical plane of the section. Then from each point in detail, drop lines to intersect lines of similar number in stretchout. Thus point 1 of section is dropped to line 1 to establish point 1'; then point 2 is dropped to make point 2'; next 3-4 is dropped to make line 3'-4' in pattern. Keep this process up until point 18' is established, and then draw lines through all points as shown, and you have the patterns.

The piece we develop as B, is the outside miter pattern, while the piece that falls off as C—that is the inside pattern. So when you develop the one miter—you also have the other one, and all you need to do is keep the outside pattern B as a template, and when marking out an inside pattern—merely reverse this pattern so—that what falls off, will be the inside pattern which goes to your work. Edges for assembling can be allowed extra. This same method can be used on all sorts of gutter details when making square miters of 90 deg. angles.

#### **American Welding Society Will Hold Welding and Cutting Show**

Taking advantage of the opportunity to hold its Welding and Cutting Exposition as a part of the National Steel and Machine Tool Exposition, the American Welding Society will conduct its fall meeting in Detroit, September 19-23. The Welding and Cutting Exposition

will be the largest ever held and will occupy over 10,000 square feet in a special section at Convention Hall.

Technical sessions of the American Welding Society will be conducted at the Book-Cadillac Hotel, Tuesday morning and afternoon, Wednesday morning and Thursday morning and afternoon. Monday has been reserved for registration and committee meetings. Members of the society are invited to participate in the plant inspection trips arranged by the American Society for Steel Treating. In addition, a special trip to the Fordson plant of the Ford Motor Co. and the Ford Airport has been arranged for Tuesday afternoon.

The American Welding Society will join with the American Society for Steel Treating in the theater at the State Theater party on Tuesday evening and the Arabian Ball at Hotel Statler on Wednesday evening. The annual dinner of the society will be served at the Book-Cadillac Hotel on Thursday evening. Following is the detailed program for the four days' sessions:

#### **Monday, Sept. 19**

9:00 a. m.—Registration.  
2:00 p. m.—Meeting of board of directors.  
7:30 p. m.—Meeting of Pressure Vessel Research Committee.

#### **Tuesday, Sept. 20**

10:00 a. m.—Technical session.  
"Airplane Welding," by J. B. Johnson, chief material branch, department, air corps, McCook field, Dayton, Ohio.

"Welding on Long Distance Aircraft," Curtis Aeroplane Corp., Buffalo.

2:00 p. m.—Technical session.  
"Study of Welds Subjected to High Temperatures," a report of San Francisco section's investigations.

"Heat Treatment by the Oxycetylene Flame," by E. E. Thum, associate editor, *Iron Age*, New York.

"A Metallurgical Study of Welds," by G. R. Brophy, research laboratory, General Electric Co., Schenectady, New York.

11:00 p. m.—Theater party, State theater.

#### **Wednesday, Sept. 21**

10:00 a. m.—Technical session.  
"Car Welding," by Victor Wiloughby, general mechanical engineer, American Car & Foundry Co., New York.

"Automobile Welding," by W. C. Happ, chief engineer, department methods and standards, Studebaker Corp., South Bend, Ind.

2:00 p. m.—Plant inspection.

7:30 p. m.—Meeting of Structural Steel Welding Research Committee.

10:00 p. m.—Grand Arabian Ball with American Society for Steel Treating, Statler Hotel.

#### **Thursday, Sept. 22**

10:00 a. m.—Technical session.  
"Production Welding of Water Heater," by H. J. Grow, Air Reduction Sales Company, New York.

"Welding in Plant of Combustion Engineering Corp.," by C. A. Reed, vice president and general manager, Combustion Engineering Corp., New York.

2:00 p. m.—Technical session.  
"Welding of Structural Steel," by Joseph Matte, Jr., of Albert Kahn, Inc., Detroit.

"Welding in the Design of Steel Plate Work," by J. L. Sforzini, engineering and maintenance department, Eastman Kodak Company, Rochester, New York.

6:30 p. m.—Annual dinner-dance, Book-Cadillac Hotel.

#### **Building Contracts Actually Awarded Show Increase Over Last Year**

While it is true that building permits have been running consistently below the figures of last year, the statistics of contracts actually awarded, as reported by the F. W. Dodge Corporation, which are a better measure of total building volume at this time, have consistently equaled or exceeded the figures of a year ago. Explanation of the different movements of the two indexes, says the National City Bank of New York City, lies chiefly in the fact that the contract figures include a large amount of engineering work, such as building of roads, subways, bridges, etc., not covered in the permits and which have been

on the increase. In this way the decline in the erection of apartments and office buildings in the cities, induced by easier tendencies in rents and increasing vacancies, has been more than offset, and instead of leading to a general slump, has simply diverted building activity into other channels.

With building construction in large volume, the steel industry has benefited by heavy structural buying, the July orders for fabricated steel being 98 per cent of makers' capacity, as against 69 per cent in July a year ago. Elsewhere in the industry, however, buying is slack, and although prices have held, mill operations have not shown the improvement hoped for in August.

#### **A Little Practical Application of Horse Sense in Business**

Why in blue blazes some of the Journeymen Tinkers around this town leave their good jobs and start in business I don't know.

Some of them act like experienced canoeists, but can't swim. Wouldn't it be utterly foolish for a canoeist who can't swim to throw away his paddles and flop overboard without the slightest knowledge of what to do under the circumstances? One thing is usually true—if there is any one nearby, some effort is made to keep his head above water or help him to shore and safety. Maybe the paddles and canoe are lost, drifting as wreckage and hazing other good going vessels by getting mixed up with the propeller or rudder, thus throwing a good ship off course or probably crippling it.

The moral of a boatsman is "Learn to swim," and the moral of a Tinker (if he expects to strike out for himself) is to learn some "Business Principles."

Some of our Tinkers remind us very much of the canoeist—they throw away their good ship (Job) and flop—and what an icy bath they get.

Some of them have been rescued by their lifeguard (Association), some of them are being held up by

the association and are treading water, and many are still floundering among the wreckage without even guts enough to holler for help or let their association throw them a straw or two to save themselves.

What do I mean by floundering in the wreckage?

Simply this—they are up to their necks in the mire of ignorance of how to keep the cost of their materials straight, how to keep proper time on a job—they don't know anything about overhead. Oh, you do, do you—well, why in heaven's name don't you practice it?

But to make doubly sure that you do know, don't forget this:

Labor plus material plus overhead equals your cost, and then when you add your profit it equals your selling price—just as much as eggs plus water plus fire equals the base of your breakfast. And get this straight, too—you can't send out bills for labor and material without overhead and succeed any more than you would put your eggs and water on the stove and expect it to boil without fire. Wake up, man—the undertaker will get you soon enough. Get a little kick out of life while you are here.

That's that.

#### **W. U. Follansbee Elected Chairman Follansbee Bros. Co., Pittsburgh**

William U. Follansbee has been elected chairman of the board of Follansbee Brothers Company, Pittsburgh, manufacturer of steel sheets and tin plate. He has served for the past 11 years as president.

John Follansbee has been elected president, advancing from vice president and general manager of sales of the Follansbee company.

R. C. Kirk has been re-elected vice president and treasurer. Other officers include: B. G. Follansbee, vice president; William D. Reid, secretary and auditor; Charles A. Wilson, assistant to the president; Edgar Masters, assistant auditor; D. S. Gaston, manager of jobbing department; R. B. Perry, manager of mill service; George B. Kerr, sales manager of sheet steel, and J.

C. Kilroy, sales manager of tin mill products.

#### **W. J. Burton Company, Detroit, Adds Sheet Metal Department**

The W. J. Burton Company, of Detroit, Michigan, has recently installed a new department devoted exclusively to the manufacture of galvanized sheet metal garbage cans, fire pails and ash cans.

The opening of this new department is in line with the policies of the organization to keep everything on hand necessary to meet the requirements of its trade.

#### **Henry R. Mortensen Enters Business at Omaha, Nebraska**

The Reliable Tin Shop, 2212 Cumings Street, Omaha, Nebraska, is a newcomer in the sheet metal and warm air heating contracting field. The shop was opened September 1, 1927. Henry R. Mortensen is the proprietor.

#### **National Enameling to Build Factory Addition**

The National Enameling and Stamping Company, 1901 Light Street, Baltimore, has awarded the contract for a one-story addition to McClintic-Marshall Company.



#### **One Inch Sheet Mineral Wool**

From John A. Bear, 207 Virginia Avenue, La Porte, Indiana.

Kindly advise where I can obtain sheet mineral wool about 1 inch in thickness to insulate a furnace.

Ans.—Minwool Insulating Company, Kalamazoo, Michigan.

#### **Repairs for Vasco Furnace**

From W. C. Wolf, 222 East Berry Street, Fort Wayne, Indiana.

Kindly advise where I can obtain repairs for a Vasco furnace.

Ans.—V. A. Smith Company, 213 West Lake Street, Chicago, Illinois.



## The Editor's Conning Tower

### Again Proving the Benefits of Association

**L**AST week there was held in Chicago a fan-furnace convention arranged by the heating systems division of the Robinson Furnace Company. The purpose of the convention was to reveal to whomsoever sought to learn the extent of the serviceability of the blower and fan in connection with a warm air heating system in the new era.

Those in attendance at the Peoria convention of the Western Warm Air Furnace and Supply Association know that several questions were asked of the fan men present which led to considerable embarrassment for those fan men. And because these men were seemingly unable at the time to answer the questions asked them to the satisfaction of their interrogators, the fan systems as applied to the warm air heating came in for severe criticism.

It was for the express purpose of teaching all those men in the warm air heating industry who were sufficiently interested to present themselves what the fan and booster can do for the industry that the fan-furnace convention was staged by the Robinson Furnace Company. Facts were revealed about the impingement of air against the hot surfaces of the furnace and about the distribution of that warmed air which very few warm air furnace installers had ever dreamed to be within the pale of practicability. They learned facts, pure and simple unadulterated facts. There were no exaggerated statements or claims made about the fan system. The system was examined and explained and the men in attendance were free to ask any questions which they desired. The company's exhibit was open to all and was taken full advantage of.

Two of the foremost participators in the Peoria conclave were present at this meeting, one remaining throughout all of the sessions. At the close of the meeting one of those men publicly announced that he had seen and heard enough to convince him of the practicability of applying the forced air principle to the warm air furnace, and that henceforth he will be ever eager to cooperate with the forced air engineers when the occasion demands.

The object most aimed at in staging this convention was to clear up misunderstandings that had got about; to show the warm air heating industry in general how the industry can very easily widen its scope of service to the public by the application of a fan or booster to the warm air heating system.

The heating systems division of the Robinson Furnace Company placed their cards on the table, so to speak, for the entire membership of the industry to see. Those who failed to attend the convention and to take advantage of this opportunity are the losers, as all those

who attended the meeting expressed themselves as well satisfied that they had gained information first hand which will stand them in good stead in the conduct of their businesses.

### Grasping at the Thinnest of Straws

**T**HERE are a lot of sheet metal contractors who still say that it is very hard or impossible to sell the heavier gauges of sheet metal. Price competition, they say, is against them.

These men are only trying to justify their own inaction or lack of initiative. And in so doing they grasp at the thinnest of straws.

It is the duty of every sheet metal contractor to sell the heavier gauges of metal in preference to the lighter wherever the former are necessary to make the job lasting. He cannot in justice to the industry do otherwise.

Therefore the whole proposition resolves itself into one of a salesmanship whose objective is to reveal the merits of the heavier grades of material and to point out the fallacy of spending a lesser amount of money on something represented as "just as good," but its longevity of service greatly reduced.

Experience has taught the real salesman that there are indeed very few desirable customers who will refuse to pay more for their materials if they are made thoroughly conversant with all of the facts and comparisons.

The whole trouble with the salesmanship of many contractors is, one successful contractor pointed out to me, that they do not realize that the average man coming to them for service is not well enough acquainted with sheet metal to be able to distinguish between a light sheet and a heavy sheet. They do not know that there are different weights and grades of roofing materials, as there are different grades of other materials. One sheet of roofing tin looks the same to them as another sheet, although the latter may be 16-gauge, while the former is 24-gauge. It is easy to see why the price argument prevails under the circumstances.

Therefore before that public is going to be induced to pay an added price for the better grades of sheets, it must have the fact proved to it that there is no bargain in buying at a lesser price a sheet that is going to have to be renewed in a very few years.

One very effective way of selling the customer on the better grades of sheets is to produce a specimen of the lighter sheet that has been in service for some time. This specimen you place into the hand of the prospective purchaser, together with a specimen of the sheet you propose to sell, and then while he is examining them retail the merits of the heavier sheet.

## Random Notes and Sketches

By Sidney Arnold

*"The essence of humor is sensibility; warm, tender fellow-feeling with all forms of existence."—Carlyle.*

The great American matinee indoor sport—bridge—has penetrated to the innermost circle of the sheet metal contracting business. The accompanying illustration gives ample proof of this. In this little bridge "foursome"—taken during the recent Michigan Sheet Metal Contractors' outing—Gus Ederle and Fred Keubler are pitting their

whose consideration for the welfare of his fellow men is beyond reproach. This fact was revealed in a rather unusual way. It so happens that Mr. Glessner has a summer cottage at the Dunes in Indiana, where he spends a considerable portion of his time while not engaged in going to conventions and working hard in Chicago. While



Left to Right: Mrs. Gus Ederle, Gus Himself, Miss Florence Busch and Fred Keubler

cunning against that of Mrs. Gus Ederle and Miss Florence Busch, sister of the well-known Bill Busch of Detroit. In this illustration Gus, who has first lead, Mrs. Ederle having taken the bid for 3 no-trump, is wondering whether his partner bid diamonds, hearts or clubs, while the genial Fred Keubler is verging on mental prostration from his attempt to hypnotize Gus into leading a spade. The score card lying in front of Mrs. Ederle looks rather suspicious for the two men.

\* \* \*

Every day I live I learn something about the unsung heroes; men whose deeds of generosity remain deeply hidden under a thick blanket of personal modesty. Charles E. Glessner of the Excelsior Steel Furnace Company, is one of those men

at the Dunes last Sunday Charlie's magnanimous spirit came to the surface to a superb degree. Our advertising man, J. F. Johnson, who also spends many of his Sundays in the vicinity of the Dunes, had the great misfortune to lose his pipe down there last Sunday. Meeting Mr. Glessner, Mr. Johnson explained his predicament, and Charlie forthwith disappeared for a moment inside his cottage, emerging a moment later with his favorite corn cob pipe. This he offered to Mr. Johnson, although it almost broke his heart to part with his old friend. Mr. Johnson related the incident to me the next day, while he contentedly puffed away on the corn cob pipe, and I must say with all due respect to Mr. Glessner's magnanimity that I should have preferred him to have kept a little better con-

trol of his generosity on this occasion at least.

\* \* \*

### Negative Proof

Charles Hall: "But Rastus, if what you say is true, do you realize that your wife may have to go to jail for life?"

Rastus: "Yes Mr. Hall, ah realizes dat part."

Mr. Hall: "You actually saw her point the gun at the man's back?"

Rastus: "Yes Mr. Hall, ah shore did."

Mr. Hall: "You're sure the bullet came from Mandy's gun?"

Rastus: "Yes Mr. Hall, ah done seed dat bullet leave that gun and enter dat niggah."

Mr. Hall: "But Rastus, if you were that near why din't you interfere?"

Rastus: "Interfeah, lord man, ah had no time to interfeah. Mandy got weak at the last minute and ah had to pull the trigger!"

\* \* \*

### In a Friendly Sort of Way

When a man ain't got a cent,  
And he's feeling kinda blue,  
And the clouds hang dark and heavy  
An' won't let the sunshine  
through,  
It's a great thing, O my brethren,  
For a fellow just to lay  
His hand upon your shoulder  
In a friendly sort o' way.

It makes a man feel curious—  
It makes the teardrops start,  
An' you sort o' feel a flutter  
In the region of your heart!  
You can't look up and meet his eyes;  
You don't know what to say  
When his hand is on your shoulder  
In a friendly sort o' way.

Oh, the world's a curious compound,  
With its honey and its gall,  
With its cares and bitter crosses—  
But a good world after all.  
An' a good God must have made  
it—

Leastways, that is what I say  
When a hand is on my shoulder  
In a friendly sort o' way.

—James Whitcomb Riley.

By L. W. MILLIS

\*These are "Data Sheets" No. 7, by L. W. Millis, of the Warm Air Study Club, The Security Stove & Manufacturing Company, Kansas City, Missouri, and comprise the seventh and eighth of a series of articles designed to interest the findings of the University of Illinois Research Staff on warm air heating in the language of the workmen. These articles will be published later in pamphlet form.

Wall calculations are based as follows: If only one wall is used, it is assumed that the exposed wall is the longest. If two, then one long and one short is assumed. If three are estimated, one long and two short are estimated. I have found this table a

Data Sheet No. 8

Table No. 4 gives the basement pipe area required for glass (and doors) area for first and second floors, also for net wall areas for both first and second story walls.

Width of Room	Length of Room						Assumption 9' High						1/6 Glass 16' Walls	South Exposure 18' Walls					
	12'			13'			14'			15'									
	1	2	3	1	2	3	1	2	3	1	2	3							
10	2	26	41	56	29	43	58	30	45	60	33	48	63	35	50	65	39	54	69
	1	1080			1170			1260			1350			1440			1620		
11	2	27	43	60	29	46	62	31	48	64	34	50	67	37	52	69	40	54	73
	1	1188			1287			1386			1485			1584			1782		
12	2	28	46	64	30	48	65	35	50	70	36	53	71	37	55	73	42	60	77
	1	1296			1404			1512			1620			1728			1944		
13	2	..	..	..	30	50	70	33	52	72	36	55	75	37	57	79	42	62	82
	1	..			1521			1638			1755			1852			2106		
14	2	..	..	..	..	..	..	34	55	76	37	58	79	38	60	81	44	65	86
	1	..			..			1764			1890			2016			2268		
15	2	..	..	..	..	..	..	..	..	..	43	60	82	40	62	85	46	68	91
	1	..			..			..			2025			2160			2430		
16	2	This is for south exposure, nothing has been added for ceiling loss. Windage up to 13 miles per hour is included.												41	66	90	48	67	93
	1													62	99	135	70	106	140



If ceiling loss is to be included, calculate the ceiling area and divide the area by the proper factor as given in Table A in Addenda to Sheet No. 3. Especial reference is made to the explanatory notes in Sheet No. 6. Ceiling loss should be included in any room with attic exposure.

Table No. 5 gives the basement pipe area required for one change of air per hour (cubical contents). If more than one change per hour is required multiply by the number of changes required (or neces-

sitated by unusual cracks). See explanatory notes in Sheet No. 6.

In previous sheets I used for illustration a room having 180 square feet net wall, 84 square feet glass and 1600 cubic feet. This could be sorted out as follows, from tables 4 and 5.

Heat Insulating for Houses in Latest Catalog by Flax-li-num

Heat Insulating for Houses is the title of the booklet prepared for en-

gineers, by Flax-li-num Insulating Company, St. Paul, Minnesota. This book deals with Thermal Insulation for Houses and Sound Control Applications.

The origin and uses of Flax-li-num are described, data is given on heat control and heat loss. Constants for standard constructions are given and examples of heat saving are figured for various types of houses. Other chapters relate to sound control, roof insulation and test data of interest to engineers.

Description	First floor pipe areas	Second floor pipe areas
180 foot wall 100 square feet.....	15 square inches	10 square inches
and 80 square feet.....	12 " "	8 " "
84 feet glass 80 square feet.....	60 " "	40 " "
and 4 square feet.....	3 " "	2 " "
1600 cubic feet, 1000 cubic feet.....	11.25 " "	7.50 " "
and 600 cubic feet.....	6.75 " "	4.50 " "
Total.....	108 square inches	72 square inches

TABLE NO. 4

Sq. ft. Area	Sq. in. basement area for NET WALL		Sq. in. basement pipe area for GLASS	
1	1st floor	2nd floor	1st floor	2nd floor
1	.15	.10	.75	.50
2	.30	.20	1.50	1.00
3	.45	.30	2.25	1.50
4	.60	.40	3.00	2.00
5	.75	.50	3.75	2.50
6	.90	.60	4.50	3.00
7	1.05	.70	5.25	3.50
8	1.20	.80	6.00	4.00
9	1.35	.90	6.75	4.50
10	1.50	1.00	7.50	5.00
20	3.00	2.00	15.00	10.00
30	4.50	3.00	22.50	15.00
40	6.00	4.00	30.00	20.00
50	7.50	5.00	37.50	25.00
60	9.00	6.00	45.00	30.00
70	10.50	7.00	52.50	35.00
80	12.00	8.00	60.00	40.00
90	13.50	9.00	67.50	45.00

No decimals below this line

100	15	10	75	50
200	30	20	150	100
300	45	30	225	150
400	60	40	300	200
500	75	50	375	250
600	90	60	450	300
700	105	70	525	350
800	120	80	600	400
900	135	90	675	450
1000	150	100	750	500
2000	300	200	1500	1000
3000	450	300	2250	1500
4000	600	400	3000	2000
5000	750	500	3750	2500

TABLE NO. 5

Square inch basement pipe area for cubical contents at one change per hour.

Cu. Ft.	1st floor	2nd floor
100	1.12	.75
200	2.25	1.50
300	3.38	2.25
400	4.50	3.00
500	5.63	3.75
600	6.75	4.50
700	7.88	5.25
800	9.00	6.00
900	10.13	6.75
1000	11.25	7.50
2000	22.50	15.00
3000	33.75	22.50
4000	45.00	30.00
5000	56.25	37.50
6000	67.50	45.00
7000	78.75	52.50
8000	90.00	60.00
9000	101.25	67.50
10000	112.50	75.00
20000	225.00	150.00
30000	337.50	225.00
40000	450.00	300.00
50000	562.50	375.00
60000	675.00	450.00
70000	787.50	525.00
80000	900.00	600.00
90000	1012.50	675.00
100000	1125.00	750.00

# Getting Furnace Business by Going After It in Proper Ways

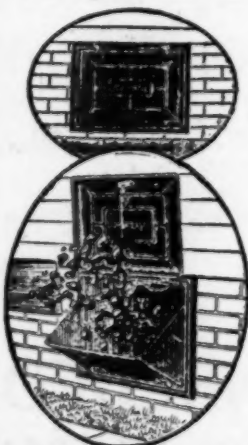
*Construction Details of Product Left for Personal Interview—Advertisements Dwell Upon Pleasures Derived*

**W**ARM air furnace installers in all parts of the country who get ahead and make money do so because they follow out a consistent policy of advertising and sales promotion. They have come to a realization of the fact that in order to get any attention from the public

at all they must employ measures that will force them and their businesses onto the attention of the public in such a manner that it will produce action favorable to their businesses.

Now, there is advertising and advertising. Some business men re-

YOU'LL WANT  
**THIS**

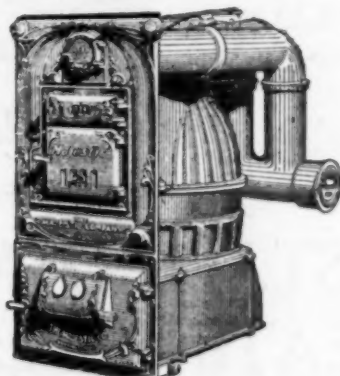


**Majestic  
Coal Window**  
The Mark of a Modern Home

**W**HEN you buy or build you'll want the leading coal window value—the break-proof, rust-proofed Majestic—with its Certified Malleable Iron frame and hinges, electro-galvanized pressed steel door and Keystone Copper Steel body and hopper. The Majestic protects your home from the impact of coal as it is delivered, and remains sightly and undamaged through years of service. We sell the Majestic in several styles for new and old homes. Call or see us for full information.

**Don't Wait Till Winter  
To Install That  
Majestic**

DOWN DRAFT FURNACE



Do it now when conditions permit it and be "all set" when the cold days come creeping in.

The economy of operation and the greater heating capacity of the Majestic Down Draft make it essentially a home owners' furnace. Every feature is designed with the idea of giving you the utmost in economy, durability and ease of operation.

We'll be glad to give  
you estimates.

**Ashbaucher's Tin Shop**

South First Street Decatur, Indiana

Advertisement of Ashbaucher's Tin Shop Appearing in the Decatur, Indiana, Democrat and Making an Appeal for Warm Air Heating Business. The Original Measured 6¾x10 Inches.



OUR CUSTOMERS RECEIVE  
THIS VALUABLE SERVICE  
FREE OF CHARGE

THE perfect operation of a heating system is of such great importance to home comfort that it is a matter of good judgment to have the furnace inspected each year. Perhaps some unavoidable accident has effected correct operation or it may be that as a result of many years of service, some part is in need of repair.

It is better to have your whole heating system checked up at this time of the year than to wait until cold weather when it is much more difficult for us to render instant service.

A thorough inspection of any furnace purchased from this organization will be made by us without charge or obligation. It is very much to our interest to see that all owners of our heating systems always receive the very best of satisfaction and at the same time this inspection on our part may enable us to render you a very valuable service.

Just phone 6-6634 or 7-7214 and this matter will be taken care of promptly.

WE SPECIALIZE IN REPAIR WORK  
Roofing—Sheet Metal Work—  
Spouting

**The YOUNGSTOWN  
FURNACE CO.**

430 Marshall St.

Phone 6634 or 77214

Advertisement Appearing in the Youngstown, Ohio, Vindicator of the Youngstown Furnace Company. The Original Was 4¼x10 Inches

gard advertising as a necessary evil and begrudge every cent they spend upon it. These men might better do no advertising at all, for if they are prejudiced against it at the outset they will not take the pains to map out a thorough, studied campaign. Without this success cannot be expected to result.

Practically every season in the year has some particular feature upon which the warm air furnace installer can hang his appeal for immediate action. At the present time warm air furnace installers who are advertising and getting the business are basing their appeal upon the desirability of having the fur-

nace looked over now, before the cold weather sets in. They know that there is a certain amount of business to be had in their own and in surrounding towns, and they know, too, that the most economical way of reaching this business is to advertise in the local mediums of



**HEAT**

**LET  
JACK STOWELL**  
MAKE IT HOT FOR YOU

ALL MAKES OF FURNACES  
CLEANED AND REPAIRED

Phone 2964 14 So. LaSalle

Advertisement of Jack Stowell Appearing in the Aurora Beacon-News. This Same Advertisement Appeared

those towns in such a way as to impress their readers with their proposition.

The accompanying illustrated local advertisements were selected as being typical warm air furnace installers' advertisements for this time of the year.

A thorough inspection of these advertisements will reveal the fact that each one of them carries practically the same appeal, which is for immediate action before the cold weather sets in, bringing with it the consequent rush of business and the inability to get the work done.

As far as these ads have gone they have done very well. It is to be regretted, however, that warm air furnace installers have failed to follow the lead that retailers in other lines have taken in their mer-

chandising methods. The latter men no longer dwell upon the details of construction. Their main objective in advertising is to show the customer how much better he can enjoy life by using the product which they are selling.

As a very excellent illustration of this type of advertising, note the advertisements of the automobile industry. Do they dwell upon construction details? No, they do not. They rather emphasize the comfort in riding, the absence of fatigue from driving and the economy effected. Construction details are left for the personal interview.

The warm air furnace has every bit as much to commend it as has the very best automobile. Then in advertising why not take advantage of this much larger opportunity to call the attention of the public to something they need?

The accompanying advertisement of Jack Stowell is an illustration of this character of advertising. It depicts the public enjoying the pleasures made possible by the warm air heating system rather than the system itself, which, of course, in the final analysis is the aim and desire. The advertisement of Jack Stowell was first used on blotters that were

**Super  
Service**

A Mt. Vernon  
Heating



**THE VERNOIS**

**Super  
Heating**

Manufactured  
Plant

## INSTALL THAT NEEDED HEATING PLANT NOW

Compare any heating plant you have ever seen with the VERNOIS and note the great saving in price. Consider its excellent and outstanding features—Then have us equip your home at once. The Vernois comes in both pipe and pipeless jobs. You will appreciate not only the uniformity of temperature they give, but the great saving in fuel cost.

We Also Do Expert Furnace Repair Work—Give Us A  
Call and Let Us Figure With You

# BENOIST BROS.

Phone  
144

**HARDWARE**

West Side  
Square

This 6x8 3/4-Inch Advertisement Produced Good Business for the Benoist Brothers Hardware Company After It Appeared in the Mount Vernon, Illinois Herold



# Jewel Coal Saver Furnaces

Are "Standard" for Miller-Storm Homes

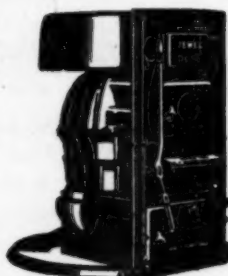
Manufactured by  
**Detroit Michigan Stove Co.**

Installed by the  
*Home Heating Specialists*  
**Wentworth-Conzelman Co.**  
8343 Mack Ave. Whittier 2123

**A 10-Year-Old Boy or Girl Can  
Operate Them—They're That Easy**

Thousands in use here in the city. Ask the man  
who owns one. Read the following list of features  
found on the Jewel:

1. Long Shaking Handle.
2. Automatic Door Opener.
3. One-piece Radiator.
4. Oversized Combustion Dome.
5. Heavy Ribbed Dome and Fire Pot.
6. Flanged Joints—NO smoke, dust or gas.
7. Double Locked Surface—ground clean cut.
8. Large, Roomy Ash Pit.
9. Expansion Joints where front joins.
10. Grate Rolls on Wheels.



Each year since our first has  
been larger in business volume  
than the year before.

A Real Knowledge of the Best  
Principles of Home Heating, and  
Fairness in All Our Dealings  
With Our Customers Are the  
Reasons for Our Success.

**We Invite Inquiries  
Without Obligation**

**We Have Installed Nearly 10,000 Jewel Furnaces  
All on a Guarantee of Perfect Satisfaction**

Here is a 7¼-Inch Square Warm Air Heating Advertisement Which Appeared  
in the Detroit, Michigan, News for the Wentworth-Conzelman Company

mailed out, and then used in the  
daily paper of Aurora, Illinois.

Here's hoping that we shall see

more of this character of advertis-  
ing by furnace installers.

Send us your advertisements.

## Healthful Heating Is Important in the Home

*Article on Warm Air Heating Appearing in  
Youngstown, Ohio, Telegram by M. A. Nell*

**"I**N CHOOSING a heating plant  
for the home, it seems a com-  
mon weakness of the average home  
owner and prospective home owner  
to have too much confidence in the  
other fellow and oftentimes permit  
himself to be misled.

"There is not enough thought  
given to the actual requirement of  
the home to be heated, and while  
the home owner has explicit con-  
fidence in the heating contractor,  
this confidence is too often shat-  
tered by the bitter experience of the  
furnace not heating the home to  
the proper degree of temperature  
throughout, or it may smoke the

walls or have many other serious  
faults, all to the detriment of warm  
air heating.

"The question is then asked, who  
is to blame? I cannot help but be-  
lieve it is the fault of the owner in  
not demanding a scientific layout of  
his job and proof that the furnace  
and fittings are of sufficient size to  
meet the requirements of the home.  
This is vitally important but fre-  
quently overlooked. Whereas if the  
home owner will only wake up and  
give this feature of his home the  
attention it merits, it will partially  
relieve the many disappointments  
now existing. The warm air system

of today, properly designed, engi-  
neered and installed, can be made to  
effect a savings of approximately 40  
per cent in the fuel burned for do-  
mestic use.

### Air Must Circulate

"Too little thought is given to the  
health of the home by the owner,  
not taking into consideration the  
value of air circulation. After all,  
the warm air method of heating is  
the only way by which the air is  
purified. By any other method there  
is no air change only by what little  
pure air seeps in through doors and  
windows, and where a home is  
closed up in winter weather it is

## SAVE WITH SUCCESS—LESS

Fuel Burned—More Heat Saved



### OPPORTUNITY Mr. Home Owner

With a small down payment we  
will install a Success Heater any  
time in the next 10 days and  
allow a year for balance. First  
payment Sept. 1.

## C. W. Mead Furnace Company

100 East Indianola Phone 4-1901

Ad in Youngstown Telegram

easy to be seen that the occupants  
of the home are breathing back into  
the system the poisons already  
thrown off, whereas if the air is  
changed four times an hour we are  
assured of purification. What is  
more essential than pure air? This  
you can have with a proper warm

air furnace installation, and at a price very much less than that of steam, hot water or vapor systems.

#### Avoid Heat Losses

"To many furnaces have been and are being installed in our city without any thought being given to the heat losses of the building. Where there are rooms of a house containing two or more exposed walls, cold ceiling and perhaps 20 per cent glass, these dimensions should be taken into consideration in computing the amount of heat required for the respective rooms.

"It requires so much fuel to produce a given amount of heat units, and it takes so many heat units to heat so many cubic feet of space and then it takes so many heat units to overcome the heat losses. Therefore the furnace salesman should make a careful analysis of the home to be heated, and if he will apply the standard code as adopted by the National Warm Air Heating and Ventilating Association he will lay out an adequate heating system and recommend a furnace of sufficient size, and can assure his client of a job that will be satisfactory and a credit to himself, his company and the warm air heating industry.

"It is a matter of the salesman preparing himself with scientific knowledge in order that he may intelligently show the home owner where he is getting value received in a well designed heating system, and the American public is always ready to pay for something a little better than they have had before.

"Therefore, let us strive to bring the warm air heating industry upon the high plane where it belongs by using plain honesty and intelligence in dealing with our customers. In so doing we are making a friend never to be forgotten, because of the service we have given in selling him a heating plant which assures comfort to him and his family."

#### Michigan Stove Company Has New Warm Air Furnace Catalog

The Michigan Stove Company, Detroit, Michigan, makers of Garland warm air furnaces, have re-

cently issued their latest catalog No. 827.

There are a great many warm air furnace installers who obtain false impressions of the methods and policies of a company with whom they have had business dealings because of the acts of a third party such as a railroad or other carrier.

One of the things which this catalog of the Michigan Stove Company has attempted to do is to explain the exact relation between the company and the purchaser of its products and the disagreements which arise from damage in transit of those products. A page of the book has been devoted to showing the purchaser of the company's products how to go about collecting damages from the railroad company for goods that have reached him in a bad condition.

The 97 series Master Garland furnace is also fully described in the catalog, giving a detailed description of the exclusive features of this furnace. An equal amount of space is also given to the Standard radiator type Garland, series 951, together with the exclusive features which this furnace has.

Then, too, there is the Standard Open Dome Garland, series 981, and the Garland pipeless. Room heaters of several varieties are also shown, making the catalog a most complete and valuable source of information.

#### Field of Consulting Engineer Now Allotted to Specialist

A few years ago it was the ambition of nearly every young engineer to establish himself as a consulting engineer as soon as he had sufficiently mastered the principles of his profession and their application to practical problems. This laudable ambition had much to do with the rapid development of many lines of engineering, for a man thrown upon his own resources must render satisfactory service to his clients or he loses his business.

The same type of young men are leaving our colleges and some still strive to become consulting engineers. However, the status of the

consulting engineer has changed and is still changing, so that there is less opportunity than formerly for the younger men to develop a practice as consultants.

Several influences are at work. In the first place the field of engineering has broadened until it is almost impossible for any one engineer to be competent to work in every branch of the field. Hence there is a tendency to specialize.

There is also a tendency toward standardization in manufacture whereby the builders of machinery develop certain sizes and types which are offered on the market. They employ many highly skilled engineers on this work alone. There is also the further tendency of buyers to rely on these manufacturing concerns for advice and assistance in planning installations.

For instance, many large electrical operating concerns have provided organizations to care for the design of their new power plants and additions to old ones, in place of calling in consulting engineers.

This naturally narrows the field of the consulting engineer, who now must generally be a specialist in one particular line and who is called in frequently to pass on the work of others. The young engineer now generally seeks employment with manufacturers or power producers. It will be interesting to watch whether consulting engineering will continue an attractive profession or whether this work will be taken over entirely by the larger organizations.

#### J. A. Campbell Sees Better Business With Vacation Period Ended

James A. Campbell, president of Youngstown Sheet & Tube Company, Youngstown, Ohio, sees moderate improvement in demand for oil well supplies, including pipe, but does not think conditions in the oil industry are yet stabilized.

He expects the return of industrial and business executives from vacations will mark the release of steel tonnage and generally stimulate business.

## A Few Collection Letters That Have Brought Good Results

*Note That the Elements of Courtesy and Humor Are Not Absent in Letters*

THE very nature of the sheet metal and warm air heating tractor's business is such that he can hardly avoid opening accounts on his books with those who employ his services. In other words, his is not a cash business. Therefore, the credit standing of each customer is a matter which must receive careful consideration before a job is undertaken, but even with the most careful supervision of the prospective customer's credit rating, the contractor gets some accounts on his books that are difficult to collect.

The merchant who is so situated frequently overlooks one simple way of increasing the cash receipts. It is so simple that it is often neglected; always be prompt in sending out monthly statements so that they reach your customers on the first.

It is not good business to do otherwise. It isn't even pleasing to many customers. Sending bills and statements promptly means that you will often get your money ahead of the other fellow who delays a few days before sending the bills.

It makes your case stronger if you can offer a cash discount. Many people pay those bills first which offer a cash discount, allowing the rest to wait until their bank balance is more favorable.

However, when you offer a cash discount there is a stronger temptation on the part of many people to take their discount even though they are a month or more late in paying their bills. When this occurs send them a note saying:

*"You evidently overlooked the fact that this discount could not be taken after..... Please add \$..... to your next payment so that we can balance your account."*

When a merchant is so unfortunate as to get slow payers on his books the difficulty can usually be

cleared up by means of a series of letters. A good collection letter is worth more than its weight in gold, but letters of the wrong kind do more harm than good. The letter must get the money and at the same time keep the man's good will. This is a letter actually used by one concern:

*"Gentlemen:*

*"It has been brought to my attention that a balance of \$9.60 has been due from you for more than 90 days.*

*"We don't understand why a man of your standing should let a little thing like this drag along. We should not think that you could afford to let this happen, and for our part we cannot afford to continually be writing letters for such a small amount.*

*"Please let us have your check without further delay."*

Probably that is the way the writer felt. But saying and writing what you feel is not always advisable.

Humor may play a part in collection letters. Not many people would care to adopt the style that Elbert Hubbard used in putting P. S. to his letters:

*"Come, Partner, dig; it will take only a minute, and God knows I need the money."*

We quote a number of collection letters from S. Roland Hall's "The Handbook of Business Correspondence," which have proven very successful and which can be adapted to any business:

1

*"That check that you no doubt intended to send us last month has not arrived. Perhaps it was just overlooked.*

*"You need not necessarily write a letter. Just make out*

*the check and attach it to this reminder.*

*"Thank You!"*

2

*"The fact that you are usual-makes us wonder why we have not received check to balance your August account.*

*"If there is anything wrong, or if there is something about the bill that is not clear, please give us a chance to adjust the matter.*

*"On the other hand, if you have found the items correct will you not kindly send us a check for the amount by return mail?"*

3

*"We gladly extended you credit, because of the good report we had from your references.*

*"Now, surely, you don't wish to spoil the good standing you evidently have with business firms generally by allowing the account you have with us to run along for a longer time without attention. A man's credit standing is a real asset—if he preserves it.*

*"Very likely time has slipped by more rapidly than you thought, but the fact is that the account has now been due for more than a month. Give it your immediate attention."*

Such letters as these sent out at intervals of two weeks will almost always bring in either the money or an explanation of the delay and still retain the customer's good will.

Avoid flippant collection stunts like the rubber stamp or the sticker which reads, "Make a noise like a check," or "Tickle us with a check and make us laugh." It is flippant and stupid and will gain you little except pity.

### Fire—Extinguishing or Preventing?

Whether firemen cannot be more profitably employed in preventing rather than in extinguishing fires is a question which the Insurance Department of the Chamber of Commerce finds, many cities in the



United States are beginning to ask themselves. Experience has proven, it states in a bulletin on fire prevention inspections by city firemen, that as much can be accomplished by removing the causes of fire as by checking the fire after it starts.

"The efficient fire chief of today," the department says, "supervises many operations in addition to the necessary function of fire extinguishment. One of the most important activities under the supervision of the modern fire department executive is the operation of a well-organized inspection system as a part of his fire prevention activities. Frequently the fire prevention committee of the local Chamber of Commerce can be of considerable assistance in establishing such service where it does not now exist or in improving the one already in operation.

"That such work intelligently done is a sure method of reducing fire waste is indicated by an examination of the reports of those cities which have done such remarkable work as to win prizes in the Inter-Chamber Fire Waste Contest. In almost every instance the record of the prize-winning cities places emphasis upon the work done by firemen."

After all, it appears that the shrieking siren is not the only evidence of a fireman's efficiency. Sheet metal contractors might enlist the aid of the fire department.

#### **Armstrong Company, Detroit, Runs Series of Articles on Correct Cementing of Furnace**

Men in the warm air heating industry having the best interests of that industry as a whole at heart are pretty well sold on the idea that correct installing of the furnace is as important as correct design. For that reason they have taken it upon themselves to give furnace installers information that will aid them in getting the furnace correctly set up and the entire installation on an efficiently working basis from the start.

The Armstrong Company, Detroit, Michigan, manufacturers of

"Tharco" asbestos furnace cement, in the interests of better warm air heating are running a series of articles in AMERICAN ARTISAN on the correct and incorrect way to cement a furnace.

The first of this series of articles appeared in the September 3rd issue of AMERICAN ARTISAN. The next will appear October 1st and the third on November 5th.

In this series of talks on cementing a furnace The Armstrong Company has given a scientific explanation of why certain things happen and why certain others do not happen under certain conditions when the furnace is newly fired.

Every warm air furnace installer who wishes to increase his fund of knowledge on warm air furnace set-up should read this series of articles from beginning to end. The first of the series appeared in the September 3rd issue. Reprints of these articles can be had by writing the company direct.

#### **Newt Pierson to Become St. Louis Branch Manager for Armco**

N. L. Pierson, Jr., Detroit branch manager of the American Rolling Mill Company, has returned to his work after a prolonged absence caused by ill health.

The acquisition by the American Rolling Mill Company of the Columbia Steel Company has required the rearrangement of the offices somewhat and Mr. Pierson, instead of returning to the Detroit branch, will become the branch manager at St. Louis.

R. L. Shugg will succeed Mr. Pierson as the branch manager of the Detroit office of the American Rolling Mill Company. Mr. Pierson's many friends in the Detroit district will be sorry to learn that he is to leave them.

#### **13th Annual Wholesale Hardware Directory Now Ready for Distribution**

The Thirteenth Annual American Wholesale Hardware Directory of the United States and Canada, published by Edward G. Baltz, 1701

Arch Street, Philadelphia, is now ready for distribution.

The American Wholesale Hardware Directory contains a list of 672 hardware jobbers located in the United States and Canada; 56 classifications of lines of goods handled, names of buyers, etc.; 501 heavy hardware jobbers; 538 department stores handling hardware and housewares; 88 New York City exporters who export hardware; 315 manufacturers' agents in the United States and Canada.

The publisher, Edward G. Baltz, says concerning the directory: "A considerable number of changes have been made during the past year, notably in the lines of goods sold. There seems to be a movement in some sections for the jobbers to reduce the territory covered, doubtless to cultivate more intensively their field than heretofore.

"There are also noted many changes in the list of manufacturers' agents, and also in the department stores who have hardware or housewares departments. The list of New York City exporters shows numerous changes each year.

"The book is considered standard in the trade, being the most accurate list of wholesale hardware houses published."

Full information concerning this directory can be had by writing Edward G. Baltz, publisher, 1701 Arch Street, Philadelphia.

### **Retail Hardware Doings**

#### **Arkansas**

H. H. Shannon and Lawrence Kerr have purchased the Hail and McAdams Hardware store, Batesville.

W. P. Koon has purchased the interest of Bennie Koon in the Koon Hardware Company, Sheridan. The business will continue under the firm name of Koon Hardware Company.

#### **Illino's**

The Andrew Hardware store has opened for business at 415 East State Street, Rockford.

#### **Iowa**

John Gard, Early, has purchased a half interest in the Matt Hardware Company.

George H. Jones and Sons have discontinued their hardware store at Early. Gunder Hegney, Fertile, is enlarging his hardware store.

# Iron and Steel Industry Shows General Improvement—Bookings Register Increase

*Prospects Bright for Pig Iron Market—Dullness Characterizes Nonferrous Metal Market*

**W**ITH the mental hurdle of August and the Labor Day holiday now past, the iron and steel industry appears to be regaining its morale and the markets generally are looking better. The improvement is spotty both as to products and districts and in some cases is largely sentimental, but the atmosphere is one of renewed vigor.

August bookings of steel producers, while not coming up to the average of the last five years, have registered an increase—as much as 15 per cent with some makers. There is a unanimity of opinion that September will continue this gain but producers, chastened by the false upturn in July, are chary about looking farther than one month ahead.

The eastern and Chicago markets are more buoyant at the moment than the Pittsburgh market, due chiefly to the check under which the automotive industry has been operating. In fact, with the summer holiday and vacation season past, the automotive situation remains the sole impediment to the customary fall pickup in the Pittsburgh and Cleveland districts, but the uncertainty on this score should be eliminated shortly. Chicago mills are benefiting from the decision of some consumers to cover more adequately against expected improved demand for their products.

Steelmaking operations are averaging just over 70 per cent, with the tendency slightly upward.

## Pig Iron

At Pittsburgh with the exception of a few inquiries issued by middle interests for limited tonnages of pig iron, and an inquiry for 3000 tons or more of foundry iron for one concern, the market presents few indications of activity.

A few carloads of bessemer iron were sold during the week at \$18.50,

base, valley. Larger lots are available at \$18, valley. Basic continues to be quoted nominally at \$17.25, valley. Shipments are proceeding at a fair rate, not more than two actual hold-up orders having been issued.

The average of bessemer pig iron sales prices in August was \$18.31, compared with \$18.50 in July. The average sales price of basic in August was \$17.25 compared with \$17.50 in July.

At Chicago pig iron activity of the past month relaxed over Labor Day, but numerous inquiries are out. These inquiries in the main are for small individual lots but the aggregate provides a fair volume of prospective business.

Some iron is being sold at \$19, base, including the cargoes received by vessel from eastern lake furnaces, but several round tonnages have been booked at \$19.50, base, and furnaces are trying to maintain this price.

Recent sales of charcoal iron include 500 tons to a melter outside the Chicago district on the basis of \$27.04, delivered Chicago. Silvery sales are light but the full schedules are obtained.

Pig iron sales at Birmingham are improving, though production is slightly above demand. Orders generally are limited to small lots. Positive statements are made by furnace interests that they are adhering to \$17.25, base, Birmingham, despite reports that this level has been shaded.

## Copper

Copper has held the best of the group, with some business at 13.25 cents, Connecticut, and 13.37½ cents, Midwest. A little price shading was done but most producers did not meet the lower quotations.

Not much metal has been sold for October shipment. The export price

was unchanged at 13.50 cents c.i.f. Mill products held unchanged.

## Tin

The price of tin fell off materially toward the end of last week due to a combination of market dullness and disappointment of speculators in August statistics.

## Zinc

The zinc market has been unusually dull of late, but on account of the narrow margin of prime western metal over the \$42 price of Joplin ore, most smelters have been rather firm in their attitude.

A little metal has been offered more freely and so the market gradually shaded again, and fell after strength early in the week.

## Lead

The lead market has been weighted down with a dragging foreign market, though use has increased slightly in this country lately and most producers are well booked for the time being. As long as the European market is weak, with large supplies from world production that is near top notch, domestic buyers are expected to hold out as long as they possibly can, in the hope of still lower quotations.

## Solder

Chicago warehouse prices on solder are as follows: Warranted 50-50, \$39.50; Commercial 45-55, \$36.50; plumbers', \$33.50, all per 100 pounds.

## Old Metals

Wholesale quotations in the Chicago district, which should be considered as nominal, are as follows: Old steel axles, \$17.00 to \$17.50; old iron axles, \$19.50 to \$20.00; steel springs, \$15.00 to \$15.50; No. 1 wrought iron, \$11.25 to \$11.75; No. 1 cast, \$13.25 to \$13.75, all per net tons. Prices for non-ferrous metals are quoted as follows, per pound: Light copper, 9 cents; zinc, 3½ cents; cast aluminum, 13¾ cents.



# Chicago Warehouse Metal and Furnace Supply Prices

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

## METALS

### PIG IRON

Chicago Fdy., No. 2.....	\$19 50
Southern Fdy. No. 2.....	23 26
Lake Superior Charcoal.....	27 04
Malleable .....	19 50

### FIRST QUALITY BRIGHT TIN PLATES

IC 20x28 112 sheets.....	\$25 10
IX 20x28.....	29 60
IXX 20x28 56 sheets.....	16 20
IXXX 20x28.....	17 65
IXXXX 20x28.....	18 95

### TERNE PLATES

IC 30x28, 40-lb. 112 sheets	\$26 00
IX 20x28, 40-lb. 112 sheets	28 50
IC 20x28, 25-lb. 112 sheets	21 75
IX 20x28, 25-lb. 112 sheets	24 35
IC 20x28, 20-lb. 112 sheets	20 00
IV 20x28, 20-lb. 112 sheets	22 50
IC 20x28, 15-lb. 112 sheets	18 50

### "ARMCO" INGOT IRON PLATES

No. 8 ga. up to and including	
1/2 in.—100 lbs.....	\$4 55

### COKE PLATES

Cokes, 80 lbs., base, 20x28.	\$13 60
Cokes, 90 lbs., base, 20x28.	13 80
Cokes, 100 lbs., base, 20x28.	14 00
Cokes, 107 lbs., base, IC	
20x28.....	14 20
Cokes, 135 lbs., base IX	
20x28.....	16 40
Cokes, 155 lbs., base, 56	
sheets.....	9 20
Cokes 175 lbs., base, 56	
sheets.....	10 05
Cokes, 195 lbs., base, 56	
sheets.....	10 90

### BLUE ANNEALED SHEETS

Base 10 ga.....per 100 lbs.	\$3 50
"Armco" 10 ga.....per 100 lbs.	4 00

### ONE PASS COLD ROLLED BLACK

No. 18-20.....per 100 lbs.	\$3 75
No. 22.....per 100 lbs.	3 90
No. 24.....per 100 lbs.	3 95
No. 26.....per 100 lbs.	4 05
No. 27.....per 100 lbs.	4 10
No. 28.....per 100 lbs.	4 20
No. 29.....per 100 lbs.	4 25
No. 30.....per 100 lbs.	4 45

### "ARMCO" GALVANIZED

"Armco" 24.....per 100 lbs.	\$6 15
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### GALVANIZED

No. 16.....per 100 lbs.	\$4 30
No. 18.....per 100 lbs.	4 45
No. 20.....per 100 lbs.	4 60
No. 22.....per 100 lbs.	4 65
No. 24.....per 100 lbs.	4 80
No. 26.....per 100 lbs.	5 05
No. 27.....per 100 lbs.	5 15
No. 28.....per 100 lbs.	5 30
No. 30.....per 100 lbs.	5 70

### BAR SOLDER

Warranted	
50-50.....per 100 lbs.	\$39 50

### Commercial

45-55.....per 100 lbs.	36 50
Plumbers.....per 100 lbs.	33 50

### ZINC

In Slabs.....	\$ 8 50
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### SHEET ZINC

Cash Lots (600 lbs.).....	\$12 00
Sheet Lots.....	13 00

### BRASS

Sheets, Chicago base.....	17 1/2 c
Mill Base.....	18 c
Tubing, brazed base.....	26 1/2 c
Wire, base.....	18 1/2 c
Rods, base.....	15 1/2 c

### COPPER

Sheets, Chicago base.....	22 c
Mill Base.....	21 c
Tubing, seamless base.....	25 c
Wire, No. 9, B & S Ga.....	18 1/2 c
Wire, No. 10, B & S Ga.....	18 1/2 c
Wire, No. 11, B & S Ga.....	19 c
Wire, No. 8, B & S Ga. and	
heavier.....	17 1/2 c

### LEAD

American Pig.....	\$7 40
Bar.....	8 40

### TIN

Big Tin.....per 100 lbs.	\$71 00
Bar Tin.....per 100 lbs.	72 00

## HARDWARE, SHEET METAL SUPPLIES, WARM AIR FURNACE FITTINGS AND ACCESSORIES.

### ASBESTOS

Paper up to 1/16.....	6c per lb.
Roll board.....	6 1/4 c per lb.
Mill board 3/32 to 1/2.....	6c per lb.
Corrugated Paper (250	
sq. ft. to roll).....	\$6 00 per roll

### BRUSHES

Hot Air Pipe Cleaning	
Bristle, with handle, each	\$0 35

### Flue Cleaning

Steel only, each.....	1 25
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### BURRS

Copper Burrs only.....	40-5%
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### CEMENT, FURNACE

American Seal, 5-lb. cans, net	\$ 40
American Seal, 10-lb. cans, net	80
American Seal, 25-lb. cans, net	3 07
Pecora.....per 100 lbs.	7 51

### CHIMNEY TOPS

Adams' Revolving		
Wt. Doz.	Prize Doz.	
4 in.....21 lbs.	\$11 00	
6 in.....24 lbs.	11 50	
7 in.....30 lbs.	13 50	
8 in.....33 lbs.	15 00	
9 in.....51 lbs.	16 50	
10 in.....56 lbs.	18 00	
12 in.....66 lbs.	22 00	
14 in.....110 lbs.	36 00	

### CLINKER TONGS

Front Rank, each.....	\$0 75
Per doz.....	8 40

### CLIPS

Damper	
Acme, with all tail pieces,	
per doz.....	\$1 25
Non Rivet tail pieces,	
per doz.....	25

### COPPERS—Soldering

Pointed Roofing	
3 lb. and heavier.....per lb.	40c
2 1/2 lb. ....per lb.	45c
2 lb. ....per lb.	48c
1 1/2 lb. ....per lb.	55c
1 lb. ....per lb.	60c

### CORNICE BRAKES

Chicago Steel Bending	
Nos. 1 to 6B.....Net	

### CUT-OFFS

Gal., plain, round or cor. rd.	
26 gauge.....	30%
28 gauge.....	35%

### DAMPERS

"Yankee" Hot Air	
7 inch, each 20c, doz.....	\$1 75
8 inch, each 25c, doz.....	2 40
9 inch, each 30c, doz.....	2 75
10 inch, each 32c, doz.....	3 00

### Smoke Pipe

7 inch, each.....	\$0 35
8 inch, each.....	40
9 inch, each.....	50
10 inch, each.....	60
12 inch, each.....	90

### Reversible Check

8 inch, each.....	\$ 55
9 inch, each.....	70

### Diamond Smoke Pipe

7 inch, doz.....	\$ 5 00
8 inch, doz.....	8 00
9 inch, doz.....	12 00
10 inch, doz.....	15 00

### Adams' Sheet Metal

7 inch, doz.....	\$ 1 60
8 inch, doz.....	2 20
9 inch, doz.....	2 60
10 inch, doz.....	2 80

### DIGGERS

Post Hole	
Iwan's Split Handle	
(Eureka)	
4-ft. Handle.....per doz.	\$14 00
7-ft. Handle.....per doz.	35 00
Iwan's Hercules pattern,	
per doz.....	14 90

### EAVES TROUGH

Galv. Crimpedge, crated 75 & 5%	
Zinc, "Barnes".....	60%

### ELBOWS

Conductor Pipe	
Galv., plain or corrugated,	
round flat Crimp.	
28 Gauge.....	60%
26 Gauge.....	45%
24 Gauge.....	15%

### Galv. & Terne Steel

Plain Rd. and Rd. Corr.:	
28 Ga.....	60%
26 Ga.....	45%
24 Ga.....	15%

### Square Corrugated

No. 28 Gauge.....	50%
26 Gauge.....	35%

### Portico Elbows

Standard Gauge Conductor Pipe,	
plain or corrugated.	
Not nested.....	70 & 5%
Nested solid.....	70 & 5%

### Sq. Corr., A. & B. & Octagon:

28 Ga.....	50%
26 Ga.....	35%

### Portico

1", 1 1/4", 1 1/2".....	45%
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### Copper

16 oz., all designs.....	45%
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### Zinc—

All styles.....	60%
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### ELBOWS—Stove Pipe

1-piece Corrugated, Uniform Blue	
"Milcor" No. 28 Gauge, Doz.	
5-inch.....	\$1 25
6-inch.....	1 35
7-inch.....	1 75

### Special Corrugated

6-inch.....	\$1 00
7-inch.....	1 60

### Adjustable—Uniform Blue

"Milcor" No. 28 Gauge, Uniform	
Blue, Doz.	
5-inch.....	\$1 75
6-inch.....	1 85
7-inch.....	2 15

### WOOD FACES—50% off list.

### FENCE

726-6-12 1/4% (100 rods).....	\$28 65
1948-6-14 1/4% (100 rods).....	43 63

### FILES AND RASPS

Heller's (American).....	50-10%
American (American).....	60-10%
Arcade.....	50%
Black Diamond.....	50%
Eagle.....	50%
Great Western.....	50%
Kearney & Foot.....	50%
McClellan.....	50%
Nicholson.....	50%
Simonds.....	60%

### FIRE POTS

Clayton & Lambert's	
East of west boundary line of	
Province of Manitoba, Canada,	
No. Dakota, So. Dakota, Ne-	
braska, Kansas, Oklahoma, Ar-	
izona, San Angelo and Laredo,	
Texas.....	62%
West of above boundary.....	45%

### Geo. W. Diener Mfg. Co.

No. 02 Gasolene Torch, 1	
qt.....	\$ 5 55
No. 0250, Kerosene, or	
Gasolene Torch, 1 qt.....	7 50
No. 10 Tinner's Furn.	
Square tank, 1 gal.....	12 60
No. 15 Tinner's Furn.	
Round tank, 1 gal.....	12 00
No. 21 Gas Soldering Fur-	
nace.....	3 60
No. 110 Automatic Gas	
Soldering Furnace.....	10 50

### Double Blast Mfg. Co.

Gasolene, Nos. 25 and 36.....	60%
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### Quick Meal Stove Co.

Vesuvius, F. O. B. St. Louis	20%
(Extra Disc. for large	
quantities)	

### GALVANIZED WARE

Pails (Galv. after made),	
10-qt. ....	\$3 12
Tubs (Galv. after made).	
No. 1.....	6 00
No. 2.....	6 25

### GLASS

Single Strength, A, 25-in.	
brackets.....	87%
Single Strength, A, 34 to 40-	
in. bracket.....	86%
Single Strength, A, all other	
brackets.....	86%
Double Strength, A, all sizes.....	86%

### HANGERS

Conductor Pipe	
Milcor Perfection Wire.....	25%
Eaves Trough	
Milcor Eclipse Wire.....	15%
Milcor Triplex Wire.....	10%
Milcor Milwaukee Extension	10%
Milcor Steel (galv. after	
forming) List.....plus 12 1/4%	
Milcor Selflock E. T. Wire,	
List.....plus 50%	

### HOOKS

V. & B. No. 1, each.....	\$0 25
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### Conductor

"Direct Drive" Wrought	
Iron for wood or brick.....	15%

### Hay

V. & B. No. 1, each.....	\$0 25
--------------------------	--------

### HUMIDIFIERS

"Front-Rank," Automatic	
In single lots.....	50%
In lots of 10 or more.....	50-5%
In lots of 25 or more.....	50-10%
Vapor pans, etc., each.....	50%

### LIFTERS

Stove Cover	
Coppered.....per gro.	\$6 00
Alaska.....per gro.	4 75

### MALLETS

Tinners	
Hickory.....per doz.	\$2 25

### MITRES

Galvanized steel mitres,	
28 Ga.....	70
26 Ga.....	60-25

### NAILS

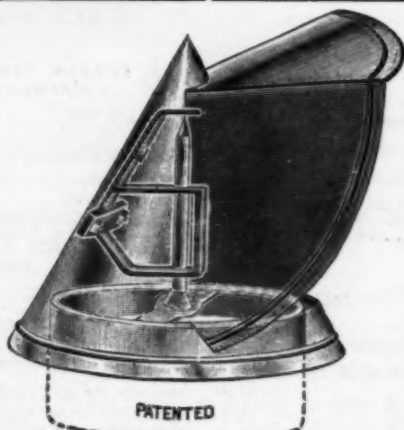
Cut Steel.....	\$4 25
Cut Iron.....	4 25
Wire	
Common.....	2 95
Cement Coated.....	2 95

(Continued on Page 52)



THE J. M. & L. A.  
**OSBORNE**  
CLEVELAND, O.

Buffalo Warehouse 64-68 Rapin Street



**New Rotable Standard Ventilator**

Sizes 4 in. to 12 in. inclusive carried in stock.  
Other items shipped promptly from factory.

"Everything Used in Sheet Metal Work"

**THIS MEANS SERVICE**

**B. B. LINE OF SHEET METAL  
SUPPLIES**

CARRIED IN STOCK BY YOUR NEAREST JOBBER  
INSURING PROMPT SHIPMENT OF QUALITY  
MATERIAL.

EVERY ITEM OF THE B. B. LINE IN A CLASS BY  
ITSELF. LOOK FOR THE B. B.

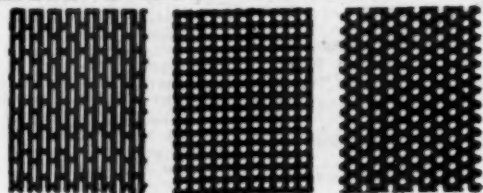
B. B. Conductor Hooks and Gutter Hangers, "SHUR-  
LOCK" Conductor Pipe, "E-Z Fit" Eaves Trough,  
"Quaker City" Mitres, Ends, Caps and Outlets.  
Other items in our No. 10 Catalog.

**BERGER BROS. CO.**

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All Sizes and Shapes of Holes  
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EVERYTHING IN PERFORATING METAL

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5649 FILLMORE ST.-CHICAGO, ILL. U. S. A.  
NEW YORK OFFICE 114 LIBERTY ST.

*One Man* made all these  
**9 inch Elbows in  
4 Hours with the  
CHICAGO ELBOW  
MACHINE**



**Q**UITE a pile, but that's not un-  
usual. Everyone using a Chicago  
Elbow Machine does the same. Makes  
no difference if it's 3 or 4-piece ad-  
justable elbows, tin or galvanized,  
from 5 to 36 in., of 24 gauge or lighter,  
this machine turns them out like  
hot cakes.

**CUT COSTS IN HALF**

Shops using the Chicago Elbow Ma-  
chine cut labor in half. One user  
says: "Anyone doing very much fur-  
nace business cannot afford to be  
without one. We are satisfied that  
anyone using this machine for one  
year would not part with it under  
any circumstances". Other users are  
equally enthusiastic.

**A PROFITABLE INVESTMENT**

The Chicago Elbow Machine pays for  
itself. Takes up but little room in the  
shop and can be operated by the  
average mechanic. Leading manu-  
facturers, jobbers, dealers and con-  
tractors have put their shops on a  
better paying basis. Let us help you,  
too. Write for full particulars.

**THE CHICAGO ELBOW MACHINE CO.**

826 North Boulevard

Oak Park, Ill.

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NETTING, POULTRY	
Galvanized before weaving	57½-5%
Galvanized after weaving	52½-5%

PASTE	
Asbestos Dry Paste:	
200-lb. barrel	\$16 00
100-lb. barrel	8 75
35-lb. pail	3 50
10-lb. bag	1 10
5-lb. bag	60
2½-lb. cartons	35

PIPE	
Conductor	
Cor. Rd., Plain Rd. or Sq.	

Galvanized	
Crated and nested (all gauges)	75-2¼%
Crated and not nested (all gauges)	70-15%

Furnace Pipe	
Double Wall Pipe and Fittings	50%
Single Wall Pipe, Round	50%
Galvanized Pipe	50%
Galvanized and Tin Fittings	50%

Lead	
Per 100 lbs.	\$12 50

Stove Pipe	
"Milcor" "Titelock" Uniform Blue Stove	
28 gauge, 5 inch U. C.	11 50
28 gauge, 6 inch U. C.	12 25
28 gauge, 7 inch U. C.	14 25
30 gauge, 5 inch U. C.	10 50
30 gauge, 6 inch U. C.	11 25
30 gauge, 7 inch U. C.	13 25

T-Joint Made up	
6-inch, 28 ga.	per doz. \$ 5.00

All Zinc	
No. 11, all styles	60%

POKERS, STOVE	
W'r't Steel, str't or bent,	per doz. \$0 75
Nickel Plated, coil handles	per doz. 1 10

POKERS, FURNACE	
Each	\$0 50

PULLEYS	
Furnace Tackle	per doz. \$0 60
Furnace Screw (enameled)	per gro. 6 00
	per doz. 75

Ventilating Register	
Per gross	9 00
Small, per pair	20
Large, per pair	50

PUTTY	
Commercial Putty, 100-lb	
Kits	\$3 40

QUADRANTS	
Malleable Iron Damper	10%

REDUCERS—Oval Stove Pipe	
Per Doz.	
7-6, 1 doz. in carton	\$2.25

REGISTERS AND BORDERS—Baseboard, Floor and Wall.	
Cast Iron	20%
Steel and Semi-Steel	40%
Baseboard	40%
Wall	40%
Adjustable Ceiling Ventilators	40%

Register Faces—Cast and Steel	
Japanned, Bronzed and Plated, 4x6 to 14x14	40%
Large Register Faces—Cast	60%
Large Register Faces—Steel	65%

RIDGE ROLL	
Galv. Plain Ridge Roll	75-10-5%
Galv. Plain Ridge Roll	75-10%
Globe Finials for Ridge Roll	50%

ROOFING	
Best grade, slate surf. prepared	\$ 3 30
Best talc surfaced	2 65
Medium talc surfaced	2 00
Light talc surfaced	1 20
Red Rosin Sheeting, per ton	57 00

SCREWS	
Sheet Metal	
7, ¾x¾, per gross	\$0 52
No. 10, ¾x1½, per gross	68
No. 14, ¾x¾, per gross	89

SHEARS, TINNERS' & MACHINISTS'	
Viking	\$22 00
Lennox Throatless	
No. 18	35%
Shear blades	10%
(f. o. b. Marshalltown, Iowa.)	

SHIELDS, REGISTER	
No. 1 "Gem" floor	\$12 00 doz.
No. 2 "Gem" wall	6 00 doz.

SHOES	
Galv. 28 Gauge, Plain or corrugated round flat crimp	60%
26 gauge round flat crimp	45%
24 gauge round flat crimp	15%

SNIPS, TINNERS'	
Clover Leaf	40 & 10%
National	40 & 10%
Star	50%
Milcor	Net

SQUARES	
Steel and Iron	Net
(Add for bluing, \$3 per doz. net.)	

MITRE	
Mitre	Net
Try	Net

TRY AND BEVEL	
Try and Bevel	Net
Try and Mitre	Net

FOR'S	
For's	per doz. \$6 00
Winterbottom's	10%

STOPPERS, FLUE	
Common	per doz. \$1 10
Gem, No. 1	per doz. 1 10
Gem, flat, No. 3	per doz. 1 00

VENTILATORS	
Standard	30 to 40%

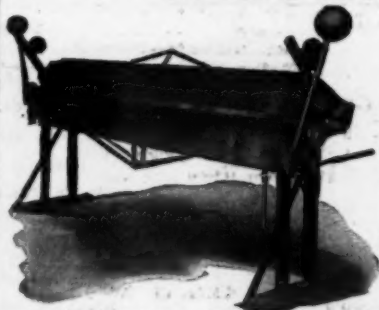
WIRE	
Plain annealed wire, No. 8, per 100 lbs.	\$3 05
Galvanized barb wire, per 100 lbs.	3 90
Wire Cloth—black painted, 12-mesh, per 100 sq. ft.	1 65
Cattle Wire—galvanis'd catch weight spool, per 100 lbs.	3 65
Galvanized Hog Wire, 80 rod spool, per spool	3 18
Galvanized Plain Wire, No. 9, per 100 lbs.	3 40
Stove Pipe, per stone	1 10

WRINGERS	
No. 790, Guarantee	each \$5 10
No. 770, Bicycle	each 4 70
No. 670, Domestic	each 4 35
No. 110, Brighton	each 3 70
No. 750, Guarantee	each 5 10
No. 740, Bicycle	each 4 70
No. 22, Pioneer	each 3 40
No. 2, Superb	each 2 65



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STANDARD OF THE WORLD



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This TREADLE GAP SHEAR is made in all standard sizes for No. 14 and lighter gauge sheets. With it, sheets can be squared, trimmed or slit.

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Patents pending

This favorite cone-shaped ventilator is now improved in several important points.

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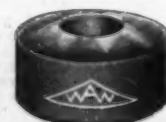


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**Bale Ties.**  
American Steel & Wire Co.,  
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**Blowers.**  
Sturtevant Co., B. F., Boston, Mass.

**Boils—Stove.**  
The Kirk-Latty Co.,  
Cleveland, Ohio  
Lamson & Sessions Co.,  
Cleveland, Ohio  
Ryerson & Son, Inc.,  
Chicago, Ill.

**Brakes—Bending.**  
Dreis & Krump Mfg. Co.,  
Chicago, Ill.  
Ryerson & Son, Inc.,  
Chicago, Ill.

**Brakes—Cornice.**  
Dreis & Krump Mfg. Co.,  
Chicago, Ill.

**Brass and Copper.**  
Copper & Brass Research As-  
sociation,  
New York  
Merchant & Evans Co.,  
Philadelphia, Pa.

**Cans—Garbage.**  
Osborn Co., The J. M. & L. A.,  
Cleveland, Ohio

**Castings—Malleable.**  
Fanner Mfg. Co.,  
Cleveland, Ohio

**Ceilings—Metal.**  
Burton Co., The W. J.,  
Detroit, Mich.

**Friedley-Voshardt Co.,**  
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Milwaukee Corrugating Co.,  
Milwaukee, Wis.  
Wheeling Corrugating Co.,  
Wheeling, W. Va.

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Fanner Mfg. Co.,  
Cleveland, Ohio  
**Chimney Tops.**  
Standard Ventilator Co.,  
Lewisburg, Pa.

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Teela Sheet Metal Co.,  
Oshkosh, Wis.

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Sturtevant Co., B. F., Boston, Mass.

**Cleaners—Section.**  
Sturtevant Co., B. F., Boston, Mass.

**Clinker Tongs.**  
L. J. Mueller Furnace Co.,  
Milwaukee, Wis.

**Clips—Roofing.**  
Wm. Pfeiffer,  
New York, N. Y.

**Coal Chutes.**  
Majestic Co., The,  
Huntington, Ind.

**Copper.**  
Copper & Brass Research As-  
sociation,  
New York

**Cornices.**  
Friedley-Voshardt Co.,  
Chicago, Ill.

**Cut-offs—Rain Water.**  
Milwaukee Corrugating Co.,  
Milwaukee, Wis.

**Damper Accessories.**  
Parker-Kalon Corp.,  
New York, N. Y.

**Damper Clips.**  
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Milwaukee, Wis.

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New York, N. Y.

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Aeolus-Dickinson Co.,  
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Lupton's Sons Co., David,  
Philadelphia, Pa.

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Barnes Zinc Products Co.,  
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**Berger Bros. Co.,**  
Philadelphia, Pa.

**Burton Co., The W. J.,**  
Detroit, Mich.

**Berger Co., L. D.,**  
Philadelphia, Pa.

**Lupton's Sons Co., David,**  
Philadelphia, Pa.

**Milwaukee Corrugating Co.,**  
Milwaukee, Wis.

**New Jersey Zinc Sales Co., The,**  
New York, N. Y.

**Wheeling Corrugating Co.,**  
Wheeling, W. Va.

**Elbows and Shoes—Conductor.**  
Barnes Zinc Products Co.,  
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**Dieckmann Co., Ferdinand,**  
Cincinnati, Ohio

**Double-Duty Mfg. Co.,**  
Aurora, Ill.

**Lupton's Sons Co., David,**  
Philadelphia, Pa.

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Milwaukee, Wis.

**Wood Faces—Cold Air.**  
American Wood Register Co.,  
Plymouth, Ind.

**Eaglesfield Ventilator Co.,**  
Indianapolis, Ind.

**Milwaukee Corrugating Co.,**  
Milwaukee, Wis.

**Fences.**  
American Steel & Wire Co.,  
Chicago, Ill.

**Fittings—Conductor.**  
Barnes Zinc Products Co.,  
Chicago, Ill.

**Flue Thimbles.**  
Milwaukee Corrugating Co.,  
Milwaukee, Wis.

**Furnace Cement—Asbestos.**  
Armstrong Co., The, Detroit, Mich.

**Buckeye Products Co., The,**  
Cincinnati, Ohio

**Connors Paint Mfg. Co., Wm.,**  
Troy, N. Y.

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Milwaukee, Wis.

**Pecora Paint Co., Philadelphia,**  
Pa.

**Furnace Cement—Liquid.**  
Technical Products Co.,  
Pittsburgh, Pa.

**Furnace Cleaners.**  
Sturtevant Co., B. F., Boston, Mass.

**Furnace Fans.**  
A. H. Robinson Company,  
Cleveland, Ohio

**Robinson Furnace Co.,**  
Chicago

**Sturtevant Co., B. F., Boston,**  
Mass.

**Warm Air Furnace Fan Co., The,**  
Cleveland, Ohio

**Furnace Rings.**  
Milwaukee Corrugating Co.,  
Milwaukee, Wis.

**Walworth Run Fdy Co.,**  
Cleveland, Ohio

**Furnaces—Gas.**  
Calkins & Pearce, Columbus, Ohio

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Agricola Furnace Co.,  
Gadsden, Ala.

**American Furnace Co.,**  
St. Louis, Mo.

**American Foundry & Furnace**  
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Bloomington, Ill.

**Brillion Iron Works,**  
Brillion, Wis.

**Calkins & Pearce, Columbus,**  
Ohio

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**Floral City Heater Co.,**  
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**Forest City Fdy. & Mfg. Co.,**  
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Nashville, Tenn.

**Henry Furnace & Fdy. Co.,**  
Cleveland, Ohio

**Hess-Snyder Co.,**  
Massillon, Ohio

**Homer Furnace Co.,**  
Coldwater, Mich.

**International Heater Co.,**  
Utica, N. Y.

**Keith Furnace Co.,**  
Des Moines, Ia.

**Lamneck Co., W. E.,**  
Columbus, Ohio

**Langenberg Mfg. Co.,**  
St. Louis, Mo.

**Lennox Furnace Co.,**  
Marshalltown, Ia.; Syracuse, N. Y.

**Liberty Foundry Co.,**  
St. Louis, Mo.

**Majestic Co., The,**  
Huntington, Ind.

**Marshalltown Heater Co.,**  
Marshalltown, Iowa

**May-Fieberger Furnace Co.,**  
Newark, Ohio

**Meyer Furnace Co., The,**  
Peoria, Ill.

**Monitor Furnace Co.,**  
Cincinnati, Ohio

**Mt. Vernon Furnace & Mfg. Co.,**  
Mt. Vernon, Ill.

**Mueller Furnace Co., L. J.,**  
Milwaukee, Wis.

**Robinson Furnace Co., A. H.,**  
Cleveland, Ohio

**Robinson Furnace Co.,**  
Chicago, Ill.

**Rybolt Heater Co.,**  
Ashland, Ohio

**Security Stove & Mfg. Co.,**  
Kansas City, Mo.

**Standard Furnace & Supply Co.,**  
Omaha, Neb.

**St. Louis Heating Co.,**  
St. Louis, Mo.

**Success Heater Mfg. Co.,**  
Des Moines, Iowa

**Thomas & Armstrong Co.,**  
London, Ohio

**Thatcher Co.,**  
Chicago, Ill.

**XXth Century Heating & Ventila-**  
ting Co.,  
Akron, Ohio

**Utica Heater Co.,**  
Utica, N. Y.

**Waterman-Waterbury Co.,**  
Minneapolis, Minn.

**Western Steel Products Co.,**  
Duluth, Minn.

**Wise Furnace Co.,**  
Akron, Ohio

**Garages—Metal.**  
Milwaukee Corrugating Co.,  
Milwaukee, Wis.

**The Thomas & Armstrong Co.,**  
London, Ohio

**Trachte Brothers Co., Inc.,**  
Madison, Wis.

**Gas (Acetylene) Dissolved.**  
Prest-O-Lite Co., Inc.,  
New York, N. Y.

**Gas (Nitrogen).**  
Linde Air Products Co.,  
New York, N. Y.

**Gas (Oxygen).**  
Linde Air Products Co.,  
New York, N. Y.

**Glass—Wire.**  
Lupton's Sons Co., David,  
Philadelphia, Pa.

**Grilles.**  
Diamond Mfg. Co., Wyoming, Pa.

**Harrington & King Perforating**  
Co.,  
Chicago, Ill.

**Hart & Cooley Co.,**  
New Britain, Conn.

**Tuttle & Bailey Mfg. Co.,**  
Chicago, Ill.

**United States Register Co.,**  
Battle Creek, Mich.

**Grilles—Store Front.**  
Tuttle & Bailey Mfg. Co.,  
Chicago, Ill.

**Guards—Machine and Belt.**  
Harrington & King Perforating  
Co.,  
Chicago, Ill.

**Handles—Beller.**  
Berger Bros. Co.,  
Philadelphia, Pa.

**Handles—Soldering Iron.**  
Hyro Mfg. Co.,  
New York, N. Y.

**Hangers—Eaves Trough.**  
Berger Co., L. D.,  
Philadelphia, Pa.

**Milwaukee Corrugating Co.,**  
Milwaukee, Wis.

**Heaters—Cabinet.**  
Gray & Dudley Co.,  
Nashville, Tenn.

**Majestic Co., The,**  
Huntington, Ind.

**Mueller Furnace Co., L. J.,**  
Milwaukee, Wis.

**Waterman-Waterbury Co.,**  
Minneapolis, Minn.

**Heaters—Gas.**  
Calkins & Pearce, Columbus, Ohio

**Heaters—School Room.**  
Floral City Heater Co.,  
Monroe, Mich.

**International Heater Co.,**  
Utica, New York

**Meyer Furnace Co., The,**  
Peoria, Ill.

**L. J. Mueller Furnace Co.,**  
Milwaukee, Wis.

**Standard Furnace & Supply Co.,**  
Omaha, Neb.

**Waterman-Waterbury Co.,**  
Minneapolis, Minn.

**Hooks—Conductor.**  
Berger Co., L. D.,  
Philadelphia, Pa.

**Hotels.**  
Fort Shelby Hotel,  
Detroit, Mich.

**Humidifiers.**  
Automatic Humidifier Co.,  
Cedar Falls, Iowa

**L. J. Mueller Furnace Co.,**  
Milwaukee, Wis.

**Robinson Furnace Co.,**  
Chicago, Ill.

**Incinerators.**  
Yard-Boy Incinerator Co.,  
Chicago, Ill.

**Lath—Expanded Metal.**  
Milwaukee Corrugating Co.,  
Milwaukee, Wis.

**Machines—Crimping.**  
Bertsch & Co.,  
Cambridge City, Ind.

**Machinery—Culvert.**  
Bertsch & Co.,  
Cambridge City, Ind.

**Machines—Tinsmiths.**  
Bertsch & Co.,  
Cambridge City, Ind.

**Burton Co., The W. J.,**  
Detroit, Mich.

**Chicago Elbow Machine Co.,**  
Oak Park, Ill.

**Dreis & Krump Mfg. Co.,**  
Chicago, Ill.

**Marshalltown Mfg. Co.,**  
Marshalltown, Iowa

**Osborn Co., The J. M. & L. A.,**  
Cleveland, Ohio

**Peck, Stow & Wilcox Co.,**  
Southington, Conn.

**Ryerson & Son, Inc., Jos. T.,**  
Chicago, Ill.

**Whitney Mfg. Co., W. A.,**  
Rockford, Ill.

**Whitney Metal Tool Co.,**  
Rockford, Ill.

**Mailing Lists.**  
R. L. Polk Co.,  
Detroit, Mich.

**Ross-Gould Co.,**  
St. Louis, Mo.

**Mandrels.**  
Hyro Mfg. Co.,  
New York, N. Y.

**Metals—Perforated.**  
Diamond Mfg. Co., Wyoming, Pa.

**Harrington & King Perforating**  
Co.,  
Chicago, Ill.

**Miters.**  
Friedley-Voshardt Co.,  
Chicago, Ill.

**Milwaukee Corrugating Co.,**  
Milwaukee, Wis.

**Miters—Eaves Trough.**  
Barnes Zinc Products Co.,  
Chicago, Ill.

**Lupton's Sons Co., David,**  
Philadelphia, Pa.

**Milwaukee Corrugating Co.,**  
Milwaukee, Wis.

**Nails—Hardened Masonry.**  
Parker-Kalon Corp.,  
New York, N. Y.

**Nails—Wire.**  
American Steel & Wire Co.,  
Chicago, Ill.

**Nitrogen (Gas).**  
Linde Air Products Co.,  
New York, N. Y.

**Ornaments—Sheet Metal.**  
Friedley-Voshardt Co.,  
Chicago, Ill.

**Gerock Bros. Mfg. Co.,**  
St. Louis, Mo.

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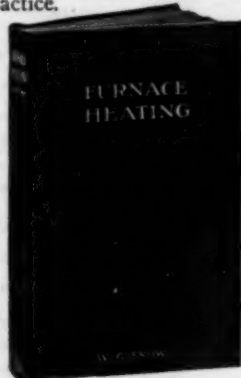
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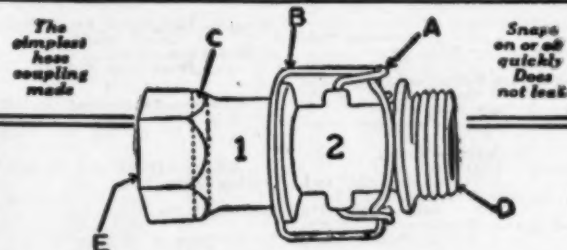
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Milwaukee Corrugating Co.,  
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Hart & Cooley Co.,  
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## WANTS AND SALES

Any yearly subscriber to **AMERICAN ARTISAN** may insert advertisements of not more than fifty words in our Want and Sales Columns **WITHOUT CHARGE**.

Such advertisements, however, must be limited to help or situation wanted, tools or equipment for sale, to exchange or to buy, business for sale or location desired.

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**Partner Wanted**—One who is a good mixer and a first-class hardware man to join me in starting a hardware store. I now have a plumbing and sheet metal shop, doing a fine business. This is a nice, clean town and a good, healthy climate. Good opportunity here. Have party who will build a store building to suit. Address F. A. Struck Plumbing & Sheet Metal Works, Golden, Colo. 10-3t

**For Sale**—One 110-gallon tank and Bowser pump. Was used for linseed oil for about one and half years. Also hand elevator only used two years. Platform size 3x3. Also Stencil outfit from one to nine, including O and from A to Z. Make me an offer for any of the above. Address John P. Paulus, 311 Franklin St., Port Washington, Wisconsin. 7-3t

**Wanted**—First class tinner and furnace man wants to lease or buy on easy terms, shop only, or wants to start new shop with reliable hardware store. Must be in good town of 2,000 or more inhabitants. Small competition. Preferably Minnesota, Iowa or Nebraska. Address B-92, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 7-3t

**For Sale**—Plumbing, heating and sheet metal shop. All tools necessary for such work, including 5-foot Niagara brake, 30-inch squaring shears. Has always been a paying investment. Small town 25 miles from Danville, Illinois. Address B-99, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 9-3t

**For Sale**—Warm Air heating and sheet metal shop. Fully equipped for any kind of sheet metal work including half-ton truck. Good growing manufacturing town in northern Illinois. 12,000 population. Will sell reasonably. Address A-455, AMERICAN ARTISAN, 620 So. Michigan Avenue, Chicago, Illinois.

**For Sale**—Sheet metal and furnace business, together with building and lot, in good Michigan town. Established business. Old age and poor health reason for selling. Address B. 100, American Artisan & Hardware Record, 620 S. Michigan Ave., Chicago, Illinois. 10-3t

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## BUSINESS CHANCES

**For Sale**—Sheet metal shop. Stock and good tools including steel cornice brake, rollers, etc., or will sell tools separately. Write A. H. Kreueger, 3319 Thomas Avenue, Minneapolis, Minnesota. 7-3t

**For Sale**—Exclusive plumbing, heating and sheet metal business in a town of 980 population located in a wealthy farming community near a city of 100,000. Illinois town. Poor health reason for selling. \$3,000 will swing deal. Address B-96, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Ill. 8-3t

**For Sale**—A No. 1 tinning, plumbing and heating shop in a 3,000 Minnesota growing town doing \$40,000 per year. No competition. Will sell building or rent it. Working six men. Good show room. A real buy. Address B-95, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Ill. 8-3t

**For Sale**—Hardware and general store, well established, doing good business, plenty of stove and pump work. Located on main street in center of town. Good chance for man and wife. Living quarters over store. Building can be bought or leased. Address P. O. Box 164, West Dennis, Mass. 8-3t

**Wanted**—To get in connection with a sheet metal worker who has his own set of machines and wants to move his equipment into a better location and take up an established business. For particulars write L. T. Petersen, Denison, Iowa. 10-3t

## SITUATION WANTED

**Situation Wanted**—By a first class plumber, tinner, steam and hot water heating and repair work. Have worked at the trades for over 30 years. Am married and want steady work the year round. Please state wages in first letter. Address B-91, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 7-3t

**Situation wanted** by a capable plumber with Massachusetts license. Can do steam fitting, guttering, roofing and furnace work. Must be permanent position. Please state wages per hour and number of hours per week. Willing to go anywhere. Address L. D. B., 556 Hubbard Avenue, Pittsfield, Mass. 9-3t

**Situation Wanted**—By sheet metal worker having 25 years' experience in shop, furnace, blow pipe, ventilation, square or round duct heating work. Know the Standard Code. Sober, steady worker. Please state wages and hours. Address L. C. Aitken, Box 484, Muscatine, Iowa. 7-3t

**Situation Wanted**—A first-class, all-round sheet metal worker, well versed in all lines of sheet metal, wishes to secure employment as Foreman or Superintendent in a first-class, up-to-date sheet metal shop. State salary, conditions. B-97, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 8-3t

**Situation Wanted**—First-class tinner and furnace man. Can do inside and outside work. 25 years at the trade. Nothing but steady work the year around. Married. Can do anything that comes in any tin shop. Address W. J. Mack, St. Charles, Illinois, Route 2, R. F. D., Box 17. 9-3t

**Situation Wanted**—By young married man with five years' experience in a sheet metal shop. Can do most everything that comes in a sheet metal repair shop; can also do gutter or cornice work and can furnish best of reference. B-98, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 8-3t

**Wanted**—Position by a general all-around sheet metal worker and layout man. 25 years' experience in all branches. None but steady year-round job considered. Prefer northern Illinois. Address A. E. Herrold, 401 W. Franklin Street, Elkhart, Indiana. E-455

**Situation Wanted**—By a first class all-around sheet metal worker and pattern cutter as working foreman with 25 years at the trade. South preferred. Address P. O. Box 522, Anderson, S. C. D-455

## SITUATION WANTED

**Situation Wanted**—By reliable tinner and furnace man. Also well experienced in the hardware line. Wisconsin preferred. Address F-455, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

**Situation Wanted**—By a first-class sheet metal worker and warm air furnace installer. Steady and reliable. Address B. 103, American Artisan. 10-3t

## HELP WANTED

**Wanted at Once**—First-class furnace salesman. One who is a live wire and not afraid of work. Must be able to estimate and make own layouts. A dandy proposition for the right man. A city of approximately seventy-five thousand population in southern Michigan. Would like to hear from someone at once. Address B. 102, American Artisan, 620 S. Michigan Ave., Chicago, Ill. 10-3t

**Wanted**—A man who is a good tinner and plumber with capital to buy an interest in a tin and plumbing shop in the fastest growing city in the country in the largest oil fields ever brought in. Lots of plumbing and tin work here now. Have more business than I can see so need more capital to run the business. Address J. B. Loveless, Box 207, Seminole, Oklahoma. 9-3t

**Sheet Metal Workers** wanted for school house ventilation work. Job is ready and can come at once. Must be union men and understand ventilation work. State experience. Address G-455, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

**Wanted at Once**—Combination plumber and tinner; also a fair knowledge of steam and hot water work. Steady job the year around. Must be able to read blue prints, estimate and lay out own work. County seat town of 3,000. Address Box 15, Aldon, Nebraska. 9-3t

**Wanted**—Combination tinner and handy man. Married man preferred. Steady work. Wages \$20 to \$25 per week with two furnished rooms included. Address B-94, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Ill. 8-3t

**Wanted**—A neat and progressive sheet metal worker. Must be willing and able to do both in and outside work. Steady work to first-class mechanic. Do not apply unless you know the business. I want a man fully qualified. Address Harry T. Klugel, North Emporia, Va. 8-3t

**Tinner**—First class, experienced for for roofing, guttering and outside work. State age and what work you can do and do right. Jno. F. Cartwright, Bowling Green, Kentucky. C-455

**Wanted at Once**—Sheet metal worker and furnace installer. Must be a good man. Write or call E. G. Hurdle, Hardware, Rock Falls, Illinois. 9-3t

**Wanted**—At once a first-class sheet metal worker and furnace man. Address Andrew Lind, Dundee, Illinois. 7-3t

## TINNERS' TOOLS

**For Sale**—1 Chicago Steel Cornice Brake (Dreis and Krump); 1 36-inch roller (Peck, Stow and Wilcox); 1 five-inch combination tool (edging, crimp, bead, thick and thin edge); 1 air pump with equipment for radiator repairing; 1 1-ton Ford truck; and smaller tools. All in A-1 condition. Address Karl F. Hedberg, 179 6th Avenue, Brooklyn, New York. 10-3t

**Wanted**—To buy used 36-inch roll for 14-inch gauge iron and lighter. Address Hanbury Sheet Metal Company, 512 West 8th street, Des Moines, Iowa. 7-3t

**For Sale**—One sectional sheet metal rack 10 ft. long. Holds 44 bundles and only 40 inches high. Cost \$50.00. Best offer takes it. Also new steel furnace rope and pulleys. R. W. Tyler, 436 North Second Avenue, Canton, Illinois. 8-3t

## TINNERS' TOOLS

For Sale—One No. 8-19-5 Ideal sectional boiler, made by American Radiator Co. Has been in use one winter. First class condition. Will sell at a bargain. Address Brouillet Sheet Metal Works, 271 Iowa street, Dubuque, Iowa. 7-3t

For Sale—One 20-inch grooving machine; one large burring or circle shears; one turning down machine. Address G. O. Crouch and Sons, 31-33 Market Square, Chattanooga, Tennessee. 7-3t

Wanted to Buy — 30-inch stove pipe rolls, 30-inch square shears and 8-foot brake. State best prices for cash. Address F. C. Ramer, Cedar Falls, Iowa. 9-3t

Wanted—One new or used Capitol Auxiliary 500 feet hot water coil. Quote your lowest cash price. Write Edw. A. Knabe, 1209 First avenue, Rock Falls, Illinois. 7-3t

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The Ventilation Handbook, by Charles L. Hubbard. A practical book designed to cover the principles and practice of ventilation as applied to furnace heating, ducts, flues and dampers for gravity heating; fans and fan works for ventilation and hot blast heating by means of a comprehensive series of questions, answers and very plain descriptions easy to understand. Price \$2.00. Order from Book Dept., AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

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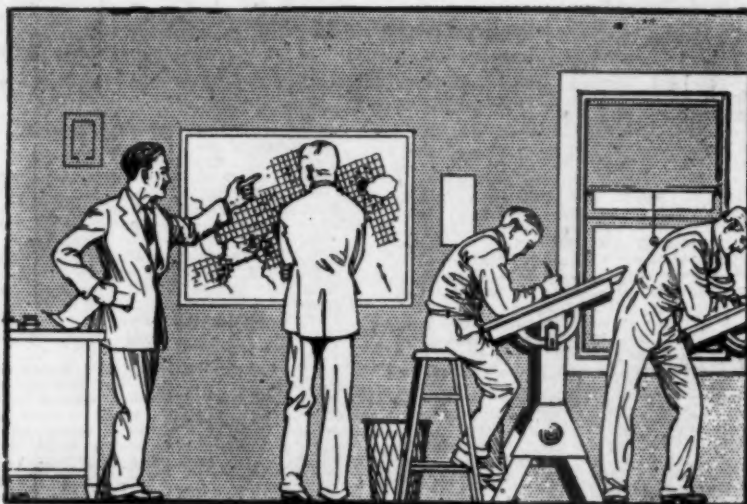


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**AKRAT VENTILATORS, Inc.**  
VENTILATING ENGINEERS  
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CHICAGO



September 7, 1927

American Artisan and  
Hardware Record,  
620 South Michigan Ave.,  
Chicago, Illinois.

Attention of Mr. J. S. Johnson.

Gentlemen:

Several months ago, our first advertisement appeared in the American Artisan, where it has remained since that time. We wish to inform you that to date, the response received from this "ad" have been very satisfactory.

For your courteous service and prompt attention to our numerous requests, kindly accept our sincere thanks.

We do not hesitate in recommending the "Artisan" as a medium of advertising that serves its patrons by producing results.

Very truly yours,

AKRAT VENTILATORS, INC.

*E. H. Petoche*  
Manager.

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Carry the Book with you. It fits the hip pocket or coat pockets. Consult it whenever estimating jobs—and always before buying. It is more than just a Price Book . . . it's a source of much valuable data.

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